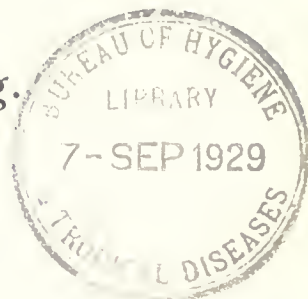


County Council of Stirling.



ANNUAL REPORT

(FOR THE YEAR 1928)

TO THE

County Council and District Committees

ANNUAL REPORT TO THE TOWN
COUNCILS OF BRIDGE OF ALLAN
AND DENNY AND DUNIPACE.

By

T ADAM, M.A., M.D., D.P.H. Camb.

Medical Officer of Health

STIRLING:
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1929

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NOTE.

The work of the County Health Department has proceeded much on the usual lines.

Of special note is the progress made with Housing Schemes. The housing problem in Stirling County has now definitely entered upon another phase, namely, the provision of houses for the less fortunate of the working-class, probably under the Slum Clearance Sections of the Housing Acts. In this connection a full report on the requirements of the Eastern District was presented to the District Committee in September, the gist of which is embodied in this report. Since the end of the year similar attention has been given to the other two Districts.

Opportunity may be taken to mention also that since the end of the year under review an excellent Maternity Home under Maternity and Child Welfare auspices has been opened at Stirling Royal Infirmary, consisting of twenty beds, ten for the County and ten for the Burgh. These will supply a long-felt want.

The ideal would be to have the County of Stirling a self-contained unit for hospital purposes, and that would appear to be well within reach when, in addition to the new Royal Infirmary at Stirling, the new Infirmary at Falkirk will have been completed.

T. ADAM,
County Medical Officer.

County Buildings,
Stirling, July, 1929.



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In their Circular of 19th December, 1928, the Scottish Board of Health, in virtue of their powers under Section 15 of the Public Health (Scotland) Act, 1897, call upon every Medical Officer of Health to prepare a Report for the year ending 31st December, 1928, said Report to contain :—

- (a) A general account of influences and conditions injurious or dangerous to the health of the District and of the measures that in his opinion should be adopted to improve those conditions.
- (b) A statement of the general enquiries he has made during the year, of any special enquiries as to sanitary matters, and of any matters as to which he has given advice or granted certificates, including any action as to offensive trades.
- (c) A statement as to the quality of the water supplies in Special Water Supply Districts and other populous centres in the district, and the sufficiency of such supplies for all domestic and sanitary purposes.
- (d) A statement as to the efficiency, or otherwise, of the drainage systems in all Special Drainage Districts, and of the methods of sewage purification and disposal ; and any suggestions for their improvement.
- (e) An account of the presence or absence of pollution of rivers or streams in the District, the sources and nature of any such pollution, and any action taken to check it.
- (f) An account of any proceedings under the Housing (Scotland) Act, 1925, dealing specifically with (i.) the sufficiency of working-class dwellings, (ii.) the habitability of existing dwellings and the action taken to deal with defective or uninhabitable dwellings, (iii.) any schemes under consideration or contemplated for the improvement of insanitary areas under Part II. of that Act, and (iv.) the action taken where instances of overcrowding have been ascertained or suspected. In regard to (i.) information should be given as to the number of houses estimated at 31st December, 1928, as then required adequately to meet the needs of the district of the Local Authority (including houses required to replace houses at present occupied that should be closed and demolished).
- (g) An account of any proceedings under the Housing (Rural Workers) Act, 1926.
- (h) A statement showing whether any conditions have arisen, or are expected to arise, pointing to the expediency of a town-planning scheme for the proper control of further development.

- (i) A statement as to the causes, origin, and distribution of diseases within the District, and the extent to which the same have depended on or have been influenced by conditions capable of removal or mitigation.
- (j) An account, with tabular statements, shewing the incidence of infectious diseases both notifiable and non-notifiable, with special reference to pneumonia and encephalitis lethargica, and of the action taken to prevent the outbreak and spread of such diseases, with special reference to arrangements for the supply of diphtheria anti-toxin and to any use made of the Schick and Dick tests of susceptibility to diphtheria and scarlet fever respectively and of the recently developed methods of artificial immunisation against these diseases. Where the Medical Officer of Health has information shewing the number of cases of infectious disease occurring in houses of different sizes he should record it in tabular form under this heading.
- (k) An account of any changes that have taken place during the year in (i.) the hospital accommodation available for persons suffering from infectious disease in general and from smallpox in particular, (ii.) the means provided for the conveyance of such persons, (iii.) the houses of reception, and (iv.) the arrangements for the destruction or disinfection of infected articles: and observations on the adequacy of the present provision for each service and on the use made of such provision.
- (l) A statement showing (i.) the number of closures of schools or parts of schools recommended and the number carried into effect; (ii.) the several periods for which the schools were closed; (iii.) the nature of the infectious disease that was the cause of closure; and (iv.) the reasons that led the Medical Officer of Health to recommend closure.
- (m) A statement of the facilities available for the treatment of persons suffering from venereal diseases and any suggestions for their improvement.
- (n) An account of the work done under the tuberculosis scheme with a note of any new measures adopted and additional facilities provided or made available during the year. (Where the tuberculosis scheme is administered by the County Council the information under this heading will be given by the County Medical Officer.)
- (o) A statement of the arrangements made and work performed under the scheme of maternity service and child welfare, and of other relevant particulars in the revised form appended to Circular. Public Health No. 7, dated 20th December, 1927. Medical Officers of Health

of Local Authorities that have no scheme of maternity service and child welfare or that are members of Combination Authorities for maternity service and child welfare in terms of the Notification of Births (Extension) Act, 1915, need not furnish the particulars in the appended statement *except* under headings 1-4 inclusive. *The attention of the Medical Officer of Health is specially directed to the necessity for following the headings of the form and supplying the necessary statistics in the form indicated.*

- (p) A report on the working of the Notification of Births Act, 1907. (This applies to areas where a scheme of maternity service and child welfare has not yet been carried into operation.)
- (q) A statement in regard to the administration of Part II. of the Midwives and Maternity Homes (Scotland) Act, 1927, with particular reference to (i.) total number of maternity homes registered in the area; (ii.) total number of beds in such homes; (iii.) applications registered or refused or registration cancelled during the year; and (iv.) inspections made during the year.
- (r) A statement in regard to the administration of the Milk and Dairies (Scotland) Acts, with particular reference to
 - (1) the arrangements made by the Local Authority for bacteriological examination of samples in terms of Sections 20 and 21, and notes on any samples examined;
 - (2) any action taken in connection with milk consigned from other areas, or the detection of dirty milk (Section 4 (3) of the Act of 1914);
 - (3) any outbreak, not previously reported, which has been spread by milk, or milk products;
 - (4) the progress of milk grading in the district;
 - (5) any other action taken under the Acts.
- (s) An account of the work done under Section 43 of the Public Health (Scotland) Act, 1897, for the inspection of meat and other articles of food, and a statement of work done or of arrangements that ought yet to be made under the Public Health (Meat) Regulations (Scotland), 1924, observations on slaughterhouses, oversea meat, unsound food, food inspection, and particulars of the sanitary condition of premises where foods are manufactured, prepared, stored or exposed for sale.
- (t) A report on the work done by the Local Authority under the Sale of Food and Drugs Acts and the Public Health (Preservatives, etc., in Food) Regulations, with observations on any special questions which have received or require attention.

REPORT.

GENERAL COMMENTARY ON RECENT PUBLIC HEALTH PROGRESS IN THE COUNTY OF STIRLING.

Beginning with the broad general aspects as exemplified by the vital statistics, the health of the County has been maintained on a very high level, and as was intimated by the Board of Health at a recent meeting with a deputation from the Eastern District Committee, Stirling County has the reputation with the Board of being one of the most progressive in health matters in the country, and in that respect has an enviable character. The outstanding statistics for the past four years are as follows :—

		Birth Rates	Death Rates	Infantile Mortality.
County of Stirling,	1925	22·5	12·9	84
„	1926	22·8	10·9	70
„	1927	20·8	11·3	60
„	1928	21·7	11·8	71
Whole of Scotland	1925	21·28	13·39	90
„	1926	20·92	13·03	83
„	1927	19·8	13·5	89
„	1928	19·8	13·3	86

The death rates have been gradually declining as indeed they have been all over the country.

The death rates compare very favourably with those for the country as a whole and our infantile mortality is extremely favourable. Perhaps I should explain that the meaning of the infantile mortality figure is that for every thousand children born alive in the County, during the year 1927 for example, only 60 died before the end of the year. There is no question that one of the main factors in this very favourable state of matters has been the work of the County Maternity and Child Welfare Committee, both administrative and otherwise. In this connection I may say that during 1921, principally as a result of the strike, a sum of £1800 was spent in providing milk for necessitous children under two years of age and nursing and expectant mothers. During the strike of 1926 again £2,200 was spent in a similar cause. The result has been that the value of milk as a food, especially for young children, has been amply demonstrated, and, as I have indicated, that in my opinion has been one of the chief causes in bringing down our infantile mortality rate.

One might also point to the improved housing standards which the Committees have been setting before the people by practical example in the new houses.

There is one further activity I might mention in connection with the County Maternity and Child Welfare Committee and that is what they have done to enable the Directors of the Stirling Royal Infirmary and also the Directors of the Falkirk Infirmary to provide an up-to-date maternity hospital at each of these Institutions. The County here quite definitely took the lead in this work and gave an example which, I am glad to say, the burghs have followed, with the result that at Stirling Royal Infirmary twenty beds are to be provided for maternity cases, ten of which belong to the County and ten to the Burgh of Stirling. A similar arrangement has been made in the case of Falkirk Infirmary where again the County have arranged for ten beds and the Burgh of Falkirk for the same number. Each of these beds is being endowed to the extent of £600 so that the County Child Welfare Committee is making a grant of £6000 to each of the Infirmaries, that is £12,000 in all, for the purposes of the Maternity Home. In addition the Burgh of Grangemouth at a later date have made arrangements for the provision of two maternity beds at Falkirk Infirmary.

This splendid policy has been backed by the Board of Health in a whole-hearted way, and there is a Government Grant of 50 per cent. on the expenditure returned to the local Authority.

When the arrangements in connection with the two Maternity Homes have been completed, I am anticipating that one of their principal effects will be a still further reduction in infantile mortality and also in maternal mortality.

While on the subject of co-operation with the General Hospitals, I would mention another matter where the County Authority have taken a similar line. I refer to the Joint V.D. Committee. For obvious reasons it was considered desirable to have venereal diseases dealt with at the General Hospitals rather than at a separate clinic set up for the purpose. To that end it has been arranged that a special V.D. Department be incorporated in the buildings of the Royal Infirmary at Stirling and at the Falkirk Infirmary, and in each case it is contemplated that the V.D. Authority will contribute something like £7500 towards the provision of the special department—that is to say a total of £15,000. This again is made with the complete approval of the Board of Health, and in this case a Government Grant of 75 per cent. is made to the V.D. Authority.

While talking of hospitals it seems to follow naturally to mention the case of (1) Camelon Hospital, and (2) Bannockburn Hospital. At Camelon Hospital the new administrative block, which was reconstructed and largely extended, was

opened in July, 1925. It is reckoned that this block will serve its purpose for at least thirty years. At Bannockburn Hospital also the administrative block has been largely extended and will also serve for many years to come. Another development has been the installation of the ultra-violet ray apparatus at both hospitals from which there have already been very good results and a considerable number of patients have been deriving benefit, a great proportion of whom are dealt with as out-door patients.

The Milk and Dairies Act, 1914, was deferred principally because of the War and its aftermath until September, 1925. Stirlingshire was one of the Counties which under this Act took the opportunity to appoint a Veterinary Inspector. One of the principal purposes of the Act was to eliminate as far as possible tuberculosis among dairy herds in order to cut off what is undoubtedly a serious menace to the health of the community.

New Dairy Byelaws have been drafted under the Act, and those for the Central and Western Districts have been approved by the Scottish Board of Health. The Eastern District Byelaws, however, in their present form have not yet received the Board's approval.

Diabetes has always been a very distressing disease and until quite recently really very little could be done to treat the disease. Some years ago, however, as a result of research work, a substance named insulin was discovered, the administration of which was found to ameliorate this extremely grave condition and to enable many diabetic subjects to live fairly useful lives. The difficulty, however, was that insulin was so expensive as to be beyond the means of many people. However an amending Public Health Act was passed which enabled Local Authorities to provide supplies of insulin for necessitous patients who did not come under the Insurance Act or who were not on the Poor Roll. The result has been that since the end of 1926 the County Authority have been providing free supplies of insulin to all such necessitous people.

The County water supplies are not only abundant but also among the best in the country. It is largely due to our splendid water supply that enteric fever is now almost a thing of the past. It is reflected also in the general health of the County.

The duties of the County Authorities both in bulk and in importance are to be enormously increased under the new Local Government Act. Reference might be made to the fact that in the County the fore-shadowed reforms in medical administration have been largely forestalled under the County Co-ordinated Scheme of Medical and Nursing Services which for quite a number of years has been in operation under the direction of a Special Combined County Committee.

In practice the County Medical and Nursing Scheme has proved efficient and a great saving to the County.

METEOROLOGICAL RECORDS.

For many years past these Annual Reports have commenced with notes on the weather throughout the year. For 1928, however, they are not available. These notes were carefully made from month to month by the late Mr. William Ballantine of Laurieston, formerly Road Surveyor to the Eastern District Committee of the County, who passed away towards the end of 1928, "full of years and honour." He was a lovable personality and one of nature's gentlemen.

The rainfall for the past year I am informed was the highest recorded (at Touch Reservoir) for at least 56 years. Figures are given in Table I. showing the monthly amount of rainfall in inches at various stations throughout the County, from Laurieston, in the east, to the head of Duchray Valley, in the west, the year's rainfall ranging from 48 inches at Laurieston to 123 inches at Duchray. No less than 200 days out of the 366 were wet, the wettest months being, January and October, and the driest, April and May.

TABLE I.—RAINFALL DURING 1928.

Station	Observer	Rain Gauge			1928											
		Diameter	Height above Ground	Height above Sea-level												
		In.	Ft. in.	ft.												
Laurieston, Falkirk ..	W. Ballantine, Esq.	5	1 3	133												
					Rain in Inches Days on which rain fell ... 8-02 4-69 3-02 1-39 2-00 5-13 2-26 5-04 3-44 5-48 4-41 3-90 48-78											
Buckieburn Reservoir ...	Charles Massie, Esq.	8	1 0	825	Rain in Inches Days on which rain fell ... 10-68 6-97 4-54 2-21 1-96 6-26 2-75 6-43 3-96 6-97 6-14 4-36 63-23											
					Rain in Inches Days on which rain fell ... 10-07 6-54 4-28 2-10 1-81 5-97 2-60 6-24 3-77 6-57 5-78 4-19 59-92											
Little Denny Filters ...	Do.	8	1 0	760	Rain in Inches Days on which rain fell ... 8-48 7-03 3-48 1-50 2-10 5-87 3-50 5-73 4-56 6-50 6-10 3-52 58-37											
					Rain in Inches Days on which rain fell ... 8-30 6-70 3-40 1-50 2-15 5-97 3-42 5-82 4-57 6-57 6-06 3-48 57-94											
Little Denny Reservoir...	Do.	8	1 0	707	Rain in Inches Days on which rain fell ... 10-20 9-25 5-10 2-80 1-95 5-20 7-35 5-20 7-10 7-30 9-35 8-83 82-23											
					Rain in Inches Days on which rain fell ... 10-50 8-80 3-48 3-80 2-15 8-15 5-10 7-25 6-70 11-29 10-50 6-05 88-77											
Fauldhu Reservoir ...	Do.	8	1 0	1202	Rain in Inches Days on which rain fell ... 9-49 4-22 4-70 1-22 1-79 3-79 2-23 4-64 3-21 5-40 4-78 4-13 49-60											
					Rain in Inches Days on which rain fell ... 11-21 5-25 4-06 1-35 1-54 4-26 2-23 5-00 3-45 6-05 4-34 54-04											
Lea Cott., Bridge of Allan	T. Fyfe, Esq.	8	..	151	Rain in Inches Days on which rain fell ... 13-36 6-58 5-14 1-76 1-62 5-03 2-50 5-03 4-09 7-64 6-96 5-17 65-48											
					Rain in Inches Days on which rain fell ... 15-29 7-46 5-33 2-60 1-83 5-87 3-24 5-71 4-59 8-57 6-96 6-08 73-53											
Sauchie House, Stirling...	Mr. J. McAnale	..	..	220	Rain in Inches Days on which rain fell ... 14-17 6-87 5-02 2-44 1-86 5-95 3-39 5-74 4-37 7-84 6-49 5-88 70-02											
					Rain in Inches Days on which rain fell ... 14-17 6-87 5-02 2-44 1-86 5-95 3-39 5-74 4-37 7-84 6-49 5-88 70-02											
Polmaise Gardens ...	Aw. B. Goudie, Esq.	8	...	455	Rain in Inches Days on which rain fell ... 14-17 6-87 5-02 2-44 1-86 5-95 3-39 5-74 4-37 7-84 6-49 5-88 70-02											
					Rain in Inches Days on which rain fell ... 14-17 6-87 5-02 2-44 1-86 5-95 3-39 5-74 4-37 7-84 6-49 5-88 70-02											
Watertown, Touch, No. 1	Do.	8	...	707	Rain in Inches Days on which rain fell ... 14-17 6-87 5-02 2-44 1-86 5-95 3-39 5-74 4-37 7-84 6-49 5-88 70-02											
					Rain in Inches Days on which rain fell ... 14-17 6-87 5-02 2-44 1-86 5-95 3-39 5-74 4-37 7-84 6-49 5-88 70-02											
Watertown, Touch, No. 2	Do.	8	...	707	Rain in Inches Days on which rain fell ... 14-17 6-87 5-02 2-44 1-86 5-95 3-39 5-74 4-37 7-84 6-49 5-88 70-02											
					Rain in Inches Days on which rain fell ... 14-17 6-87 5-02 2-44 1-86 5-95 3-39 5-74 4-37 7-84 6-49 5-88 70-02											
Garzinnock House ...	G. Stirling, Esq.	5	1 0	85	Rain in Inches Days on which rain fell ... 14-59 6-66 5-94 2-37 1-55 5-97 2-58 5-43 3-86 8-17 6-38 5-31 63-81											
					Rain in Inches Days on which rain fell ... 10-82 7-66 6-20 2-66 1-79 5-10 3-27 4-33 4-62 8-77 6-90 4-12 66-24											
Argomery ...	Mr. P. McCowan	5	1 6	150	Rain in Inches Days on which rain fell ... 12-05 5-70 4-40 1-70 2-15 5-40 3-70 5-80 4-20 7-90 7-25 5-40 65-65											
					Rain in Inches Days on which rain fell ... 13-10 6-00 6-70 2-35 2-00 5-40 3-80 5-85 1-45 9-05 8-40 6-20 73-90											
Mazzeck Reservoir ...	J. R. Sutherland, Esq.	..	..	226	Rain in Inches Days on which rain fell ... 13-10 6-00 6-70 2-35 2-00 5-40 3-80 5-85 1-45 9-05 8-40 6-20 73-90											
					Rain in Inches Days on which rain fell ... 13-10 6-00 6-70 2-35 2-00 5-40 3-80 5-85 1-45 9-05 8-40 6-20 73-90											
Blunfield ..	Do.	..	..	250	Rain in Inches Days on which rain fell ... 13-10 6-00 6-70 2-35 2-00 5-40 3-80 5-85 1-45 9-05 8-40 6-20 73-90											
					Rain in Inches Days on which rain fell ... 13-10 6-00 6-70 2-35 2-00 5-40 3-80 5-85 1-45 9-05 8-40 6-20 73-90											
Head of Duchray Valley	Do.	..	..	1500	Rain in Inches Days on which rain fell ... 10-85 8-60 4-80 1-80 2-10 9-60 9-10 9-85 8-15 14-60 13-50 9-80 123-05											
					Rain in Inches Days on which rain fell ... 10-85 8-60 4-80 1-80 2-10 9-60 9-10 9-85 8-15 14-60 13-50 9-80 123-05											

VITAL STATISTICS.

Population.—Table II. gives for each parish in the County, a note of the area in aeres, and the population as ascertained at the census of 1911 and of 1921 respectively, distinguishing Burghal and landward areas. In addition, the population is shown for each District, as estimated by the Registrar General as at the middle of 1928. For the Central District (landward) the last census population was 27,465, and the Registrar General's figure for 1928 is 27,213, showing a decrease of 242; in the Eastern District the Census figure was 41,772, the estimate for 1928 being 39,916.; and in the Western District the figures are respectively 11,797 and 11,423; the total estimate for the landward part of the County being, 78,552—a decrease in population of 2,482. These figures for 1928 are obviously very much underestimated, as in all probability there has been an appreciable increase in all three Districts.

Births and Birth-Rates.—The number of births in the three Districts, after correction for transfers, was 1704, giving a birth-rate of 21.7 per 1000 of population. For the year 1927 the rate was the lowest on record namely 20.8, that for 1928 being the fourth lowest. Table III. gives the figures for the past six years.

From the Registrar General's preliminary statement I note that the birth-rate for the whole of Scotland for the year was 19.8 per 1000, which is exactly the same as that for the year 1927. These rates for 1927 and 1928 are the lowest in record. The maximum Scottish birth-rate occurred in 1876 when it was 35.6 per 1000.

Deaths and Death-Rates.—From Table IV. it will be seen that the number of deaths was 926 giving a death-rate of 11.8 per 1000 which is just about the average rate for the past ten years, during which time the rate has varied very little.

The death-rate for Scotland was 13.3 per 1000, which is the lowest recorded with two exceptions, that for the year 1923 having been 12.9 and that for 1926, 13.0.

Table II.—POPULATION OF THE COUNTY OF STIRLING, AS ASCERTAINED AT THE CENSUS OF 1921, WITH REGISTRAR-GENERAL'S ESTIMATED LANDWARD POPULATION FOR 1928.

PARISH	AREA IN ACRES			POPULATION					
				CENSUS 1911			CENSUS 1921		
	Total	Burghal	Land-ward	Total	Burghal	Land-ward	Total	Burghal	Land-ward
CENTRAL DISTRICT.									
Denny ...	8,276	368	7,908	9,166	3,853	5,313	9,187	5,130	5,871
Dunipace ...	5,593	112	5,481	1,936	1,311	625	1,814		
Gargunnoch ...	9,862	..	9,862	573	..	573	586	..	580
Kilsyth ...	13,123	280	12,843	11,052	8,106	2,946	10,364	7,600	2,704
Kippen ...	11,268	..	11,268	1,365	..	1,365	1,518	..	1,518
Logie ...	9,696	774	8,322	4,273	3,121	1,252	5,105	3,579	1,526
St. Ninians ...	37,543	..	37,543	13,868	..	13,868	14,812	..	14,812
Stirling ...	1,825	1,377	448	21,461	21,200	261	31,345	21,345	388
Total for Central Dist.	96,586	2,911	93,675	63,794	37,591	26,203	65,119	37,654	27,465

Landward Population (estimated by the Registrar-General) as at the middle of 1928—27,213.

EASTERN DISTRICT.									
Alrth ...	5,561	..	5,561	1,515	..	1,515	1,777	..	1,777
Falkirk ...	15,111	1,680	13,431	42,423	33,574	8,849	42,762	33,308	9,454
Gartgarnmouth ...	8,016	1,057	6,989	19,470	10,219	9,251	18,708	9,723	8,985
Garbert ...	3,971	..	3,971	12,994	..	12,994	12,389	..	12,389
Muiravonside ...	7,964	..	7,964	5,706	..	5,706	5,758	..	5,758
Slamannan ...	10,856	..	10,856	3,440	..	3,440	3,409	..	3,409
Total for Eastern Dist.	51,509	2,737	48,772	85,538	42,793	41,745	84,803	43,031	41,772

Landward Population (estimated by the Registrar-General) as at the middle of 1928—39,916.

WESTERN DISTRICT.									
Baldernock ...	4,320	..	4,320	747	..	747	763	..	763
Balfron ...	7,821	..	7,821	1,155	..	1,155	1,190	..	1,190
Buchanan ...	41,644	..	41,644	795	..	795	585	..	585
Camphle ...	17,860	..	17,860	5,304	..	5,304	5,335	..	5,335
Crymen ...	30,854	..	30,854	1,260	..	1,260	1,214	..	1,214
Fintry ...	13,788	..	13,788	280	..	280	381	..	381
Killearn ...	15,375	..	15,375	1,085	..	1,085	1,054	..	1,054
Strathblane ...	9,085	..	9,085	1,024	..	1,024	1,275	..	1,275
Total for Western Dist.	140,747	..	140,747	11,659	..	11,659	11,797	..	11,797

Landward Population (estimated by the Registrar-General) as at the middle of 1928—11,423.

Total for County ...	288,842	5,648	283,194	160,991	81,384	79,607	161,719	80,685	81,034
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Total Landward Population (Registrar-General's estimate)—78,552.

Table III.—BIRTHS AND BIRTH-RATES PER 1000 OF POPULATION WITHIN THE COUNTY OF STIRLING, EXCLUSIVE OF BURGHS, 1923-1928.

District	1923		1924		1925		1926		1927		1928	
	Births	Birth-Rates	Births	Birth-Rates	Births	Birth-Rates	Births	Birth-Rates	Births	Birth-Rates	Births	Birth-Rates
Central ...	699	25·6	718	26·8	672	24·5	696	25·3	555	20·3	620	22·6
Eastern ...	959	23·5	955	23·9	925	22·7	938	23·1	916	22·7	905	22·7
Western ...	194	16·7	190	15·8	200	17·2	188	16·2	181	15·7	179	15·7
County ...	1852	23·2	1853	23·7	1797	22·5	1822	22·8	1652	20·8	1704	21·7

Table IV.—DEATHS AND DEATH-RATES PER 1000 OF POPULATION WITHIN THE COUNTY OF STIRLING, EXCLUSIVE OF BURGHS, 1923-1928.

District	1923		1924		1925		1926		1927		1928	
	Deaths	Death-Rates	Deaths	Death-Rates	Deaths	Death-Rates	Deaths	Death-Rates	Deaths	Death-Rates	Deaths	Death-Rates
Central ...	220	11·7	373	13·9	360	13·1	315	11·5	302	11·0	318	11·7
Eastern ...	420	10·3	498	12·4	499	12·2	431	10·6	461	11·4	465	11·6
Western ...	156	11·7	163	14·3	178	15·3	121	10·4	135	11·7	143	12·5
Whole County	876	11·0	1034	13·2	1037	12·9	867	10·9	898	11·3	926	11·8

VACCINATION (SCOTLAND) ACT, 1907.

From the Registrar's returns under the above Act, I find that the number of conscientious objectors to infantile vaccination was 633, as shown in Table V. Of these 189 were in the Central District, 412 in the Eastern District, and 32 in the Western District. The number of births in the County during the year was 1704, so that approximately 37 per cent of the infants under one year of age remain unvaccinated. The above Act came into operation in the year 1908, and the following is a note of similar percentages for each year since :—

1908—15%	1914—45%	1920—34%	1926—38%
1909—24%	1915—44%	1921—33%	1927—41%
1910—30%	1916—45%	1922—37%	1928—37%
1911—31%	1917—47%	1923—36%	
1912—37%	1918—45%	1924—36%	
1913—35%	1919—45%	1925—37%	

In the Central District, for the year under review, the percentage of infants remaining unvaccinated was 30, in the Eastern District, 46, and in the Western District, 18.

Table V.—CONSCIENTIOUS OBJECTORS TO VACCINATION, 1928.

Central District Parish		Eastern District Parish		Western District Parish	
Denny and Dunipace	48	Airth	18	Balfron	4
Gargunnoch	...	Falkirk	76	Baldernock	...
Kilsyth	34	Grangemouth	82	Buchanan	...
Kippen	2	Larbert	100	Campsie	20
Logie	8	Muiravonside	89	Drymen	4
St. Ninians	96	Slamannan	47	Fintry	2
Stirling	1			Killearn	...
				Strathblane	2
Total	189	Total	412	Total	32
Total of three Districts, ... 633.					

INFECTIOUS DISEASE NOTIFICATIONS.

Under the Infectious Disease (Notification) Act, 1889, the total number of cases notified in the County throughout the year was 617. This number, however, does not include such diseases as Tuberculosis, Chickenpox, Malaria and other diseases which have become more recently notifiable, and is strictly comparable with figures given in former reports. The notification rate per 1000 of population works out at 7.6, the

figures for the past ten years being :—1918, 3·7 ; 1919, 5·8 ; 1920, 8·9 ; 1921, 8·2 ; 1922, 5·1 ; 1923, 4·1 ; 1924, 6·9 ; 1925, 8·9 ; 1926, 8·2 ; and 1927, 7·0, giving an average rate of 6·6 per 1000. The rate for 1928 is therefore 1 per 1000 above the average. In the Central District the notification rate is 7·8, in the Eastern District, 8·7, and in the Western District, 3·3.

Table VI. gives the figures for each parish, the highest notification rate being in the parish of Falkirk, where there was a considerable prevalence of diphtheria. Logie parish comes next, followed by Strathblane, Balfron, and so on. In the five parishes given last in the table there was not a single case.

TABLE VI.—INFECTIOUS DISEASE NOTIFICATIONS PER 1000 OF POPULATION (exclusive of Tuberculosis, Chickenpox, Malaria, and other Diseases made notifiable within recent years) IN EACH LANDWARD PARISH IN STIRLINGSHIRE for the Year 1928. Only those Diseases specified in the Notification Act of 1889 are included.

Parish	Population	No. of Notifications	Rate per 1000 of Population
Falkirk	9,451	147	15·5
Logie	1,526	21	13·7
Strathblane	1,275	11	8·6
Balfron	1,189	10	8·4
St. Ninians	14,832	125	8·4
Denny	5,251	44	8·3
Muiravonside	5,758	46	8·0
Airth	1,777	13	7·3
Larbert	12,389	90	7·2
Grangemouth	9,008	56	6·2
Dunipace	620	3	4·8
Kilsyth	2,764	13	4·7
Kippen	1,508	7	4·6
Gargunnoch	586	2	3·4
Slamannan	3,409	11	3·2
Campsie	5,385	15	2·8
Drymen	1,214	3	2·4
Flinty	381	..	0·0
Stirling	388	..	0·0
Buchanan	585	..	0·0
Baldernock	763	..	0·0
Killearn	1,052	..	0·0
Total	81,061	617	7·6
Central District	27,475	215	7·8
Eastern District	41,792	363	8·7
Western District	11,794	39	3·3

BACTERIOLOGICAL WORK.

Table VII. shows the number of specimens submitted to the Bacteriological Department of Edinburgh University during the year, from the three County Districts and from the Burghs of Denny and Bridge of Allan. The total specimens numbered 1112, and the total charges amounted to £251 13s 5d.

In addition to the samples sent to Edinburgh University, specimens taken in connection with the treatment of venereal diseases were sent to the Physicians and Surgeons Laboratory, Edinburgh, while samples of milk taken under the Milk and Dairies Act, and the Tuberculosis Order were examined by Professor Carstairs Douglas, Anderson College, Glasgow.

Table VII.—NO. OF SPECIMENS SUBMITTED FOR BACTERIOLOGICAL EXAMINATION, WITH A NOTE OF THE COST, DURING THE YEAR 1928.

District or Burgh.	Throat Swabs for Diphtheria Bacillus.	Specimens of Blood in suspected Enteric Fever.	Samples of Sputum for T.B.	Others.	Total Number.	Total Cost including Telegram Charges, etc.
Central District	313	5	37	1	356	£82 1 6
Eastern District	633	14	33	4	684	151 17 5
Western District	22	1	11	..	34	8 13 6
Burgh of Denny	14	...	4	...	18	4 4 0
Burgh of Bridge of Allan	15	1	4	...	20	4 17 0
Total	997	21	89	5	1112	£251 13 5

INFANTILE MORTALITY, 1891-1928.

For the year 1928 the infantile mortality rate, ie., the number of deaths of children, under one year per thousand births, was 71. For the previous year the rate was as low as 60, which constituted a record for Stirlingshire, the next lowest rates having occurred in the years 1921 and 1926, the rate for both of these having been 70, so that the rate for 1928 is the fourth lowest recorded.

Table VIII. shows for each District the number of Births, the Birth-rate and the infant mortality rate for the past 38 years, and indicates the decline that has taken place in the deaths of young children, From a mean County rate of 110 for the ten years 1891-1900, the mortality has gradually fallen to the present low figures.

For the whole of Scotland the Registrar General states that the infantile mortality rate was 86 per 1000 births. This rate is 3 less than that of the previous year, 2 less than the mean of those of the preceding five years and 6 less than the mean of those of the preceding ten years.

TABLE VIII.—BIRTHS AND BIRTH-RATES AND DEATHS UNDER ONE YEAR PER 1000 BIRTHS, 1891-1928.

Year	CENTRAL DISTRICT			EASTERN DISTRICT			WESTERN DISTRICT			COUNTY			
	No. of Births	Birth-rate	Deaths under 1 Year per 1000 Births	No. of Births	Birth-rate	Deaths under 1 Year per 1000 Births	No. of Births	Birth-rate	Deaths under 1 Year per 1000 Births	No. of Births	Birth-rate	Deaths under 1 Year per 1000 Births	Deaths under 1 Year per 1000 Births
1891 to 1900	5272	31.3	110	15,056	32.6	115	3006	24.9	109	23,424	34.4	2601	110
1901 to 1910	7355	33.0	102	15,233	36.9	96	2468	21.2	88	23,050	31.3	2253	98
1911	846	32.082	107	1206	28.673	100	235	20.128	85	2287	28.5	230	100
1912	797	29.557	99	1155	27.679	88	202	17.361	54	2154	26.9	192	90
1913	844	31.5	98	1173	28.8	104	237	20.8	73	2254	28.5	221	96
1914	845	31.2	101	1169	28.0	87	219	19.4	78	2233	28.2	204	91
1915	784	28.2	102	1088	26.7	98	207	18.3	82	2079	20.0	204	100
1916	688	24.3	74	1442	24.7	82	190	16.8	89	1885	23.4	151	80
1917	646	22.3	80	1399	21.4	106	190	16.7	68	1712	21.1	158	92
1918	665	22.4	69	1380	22.2	88	178	15.5	51	1757	21.3	132	75
1919	660	22.2	84	1317	24.5	88	156	13.7	141	1834	22.2	167	91
1920	838	27.4	69	1384	29.2	78	231	20.2	61	2208	27.2	166	73
1921	813	29.6	69	1274	27.5	70	221	18.7	46	2182	20.9	153	70
1922	691	24.6	91	1231	23.9	98	209	17.4	62	1917	23.2	178	93
1923	690	25.6	77	1308	23.5	73	194	16.7	46	1852	23.2	133	72
1924	718	26.8	75	1247	23.0	69	180	15.8	94	1855	23.0	137	75
1925	572	24.5	88	1252	22.7	85	200	17.2	70	1797	22.5	152	84
1926	696	25.3	70	938	23.1	71	188	16.2	59	1822	22.8	127	70
1927	555	20.3	61	916	22.7	61	181	15.7	55	1652	20.8	100	60
1928	620	22.8	68	905	22.7	77	179	15.7	56	1704	21.7	122	71

MATERNITY SERVICE AND CHILD WELFARE SCHEME.

As explained in former reports there is a joint scheme for the purposes of Maternity and Child Welfare which includes the three Districts of the County, and the Burghs of Bridge of Allan and Denny and Dunipace: and the personnel of the medical and nursing services for this work is the same as that for Tuberculosis and School medical inspection.

In their last circular with regard to Annual Reports the late Board of Health asked for certain particulars as set forth in a form prepared by them. The whole form, with answers, is given below, but it will be noticed that some of the queries do not apply to the Stirlingshire scheme in its present stage of development.

With regard to the heading No. XVI, however, it may be said that since the end of the year, a Maternity Home of 20 beds has been opened in connection with the new Stirling Royal Infirmary. Ten of these beds are to be administered by the County Maternity and Child Welfare Committee and ten by Stirling Town Council.

The County Child Welfare Committee and Falkirk Town Council have made a similar arrangement with the Directors of the new Infirmary at Falkirk, but a considerable time will elapse before the Maternity Home at Falkirk is available.

In the meantime ten beds at Stirling Royal Infirmary are available for maternity cases from the Central and Eastern Districts of the County and also from the Burghs of Bridge of Allan and Denny.

The County beds are meant primarily for urgent maternity cases of a **non-infectious nature** requiring hospital treatment, in which complications arise either ante-natal, post-natal or during labour.

It is possible, however, that for a time there may not be a sufficient number of these urgent cases to occupy all the ten beds, in which event it is contemplated that any unoccupied beds will be available for the accommodation of expectant mothers whose home circumstances are for various reasons considered very unsuitable.

The Maternity Department at the Stirling Royal Infirmary is also meant to serve the very useful purpose of an ante-natal clinic where doctors' or midwives' special cases may by arrangement be kept under observation.

Where a medical practitioner desires to have a case admitted to the Maternity Home from the areas already mentioned, he has been asked to communicate first with me, giving the name and address and a note of the circumstances of the case calling for special consideration and treatment.

It is to be remembered, however, that cases of a specially urgent nature may occasionally arise where any delay caused by communicating with me would increase the risk to the patient. In such a case the medical practitioner has been told to have the patient removed on his own responsibility and immediately thereafter to report the circumstances to me. Such cases should in practice be very exceptional because it will usually be possible to reach me at least by 'phone.

The County Joint Committee have resolved to charge for each case admitted to the Maternity Home a fee of 30/- in respect of maintenance and treatment.

As has been already stated the Maternity Home at Stirling is entirely reserved for cases of a non-infectious nature. Cases of puerperal sepsis (puerperal fever) from the area mentioned which are unsuitable for treatment at home have by arrangement with me been accommodated at the County Hospitals for treating Infectious Diseases, namely at Camelon and Bannockburn, the severest cases, however, being sent to Belvidere Fever Hospital, Glasgow. That arrangement will continue as at present.

I.—Infantile Mortality.	Central District	Eastern District	Western District	Burghs of		Total	Rate per 1000 Births
				Denny and Dunipace	Bridge of Allan		
Number of Deaths	42	70	10	8	2	132	71·8
Age-Groups—							
Under 1 week	17	24	3	3	1	48	26·1
1-4 weeks	7	10	2	2	...	21	11·4
4 weeks to 3 months	5	16	2	...	1	24	13·1
3-6 months	2	12	1	...	...	15	8·1
6-12 months	11	8	2	3	...	24	13·1
CAUSES OF DEATH—							
Chickenpox	...	...	...	...	...	...	...
Measles	1	...	...	...	...	1	0·5
Scarlet Fever	...	...	...	...	...	...	...
Whooping-Cough	4	3	2	1	...	10	5·4
Diphtheria and Croup ...	...	...	...	...	...	...	...
Erysipelas	...	1	...	...	...	1	0·5
Tuberculous Diseases ...	...	1	1	...	...	2	1·1
Meningitis (not Tuberculous)	...	2	...	...	...	2	1·1
Hydrocephalus	...	...	...	...	...	...	...
Convulsions	3	3	...	...	1	7	3·8
Pneumonia (all forms) ...	4	16	...	3	...	23	12·5
Bronchitis	3	1	1	...	...	5	2·7
Diarrhoea and Enteritis ...	5	6	...	...	...	11	5·9
Other Digestive Diseases	...	...	...	...	...	...	...
Congenital Malformations	...	...	...	...	...	...	...
Congenital Heart	2	4	1	...	...	7	3·8
Premature Birth	14	12	1	3	...	30	16·3
Atrophy, Debility, and Marasmus	4	16	3	1	...	24	13·1
Aretectasis	...	...	1	...	...	1	0·5
Injury at Birth	1	...	...	...	...	1	0·5
Suffocation, overlying ...	1	1	...	...	1	3	1·6
Syphilis	...	...	...	...	...	...	...
All other Causes	...	4	...	...	...	4	2·2

II.—Births.	Central District	Eastern District	Western District	Burghs of		Total
				Denny and Dunipace	Bridge of Allan	
Number Registered	620	905	179	103	31	1838
Legitimate	576	844	167	100	28	1715
Illegitimate	44	61	12	3	3	123
Number Notified	572	788	150	70	27	1607
Number attended by Doctor ..	305	553	126	31	27	1042
Number attended by Midwife	267	235	24	39	..	565
Number of Still Births	12	35	5	8	1	61

III.—Maternal Mortality.

Number of deaths resulting from Miscarriage or Child-Birth ...	4	4	...	..	...	8
Number of Deaths resulting from Puerperal Septis	1	...	...	1	...	2

IV.—Report under Midwives Act, 1915.**(1).—LIST OF CERTIFIED MIDWIVES.****Central Stirlingshire.**

- 5972—Margaret Binnie, 129 Watson's Place, Dennyloanhead.
 1842—Susan Chalmers, 132 East Borland, Denny.
 853—Julia Coleman, 9 Russell Place, Bonnybridge.
 902—M. R. Dickie, Main Street, Plean.
 792—Isabella Dingwall, Redgatchill, Kippen.
 3598—Elizabeth Ferguson, Anchor Cottage, Dunipace.
 3300—Jean Hendry, Stoneywood, Denny.
 1107—Sarah Hughes, 22 High Street, Kilsyth.
 523—Helen Innes, Wallace Street, Bannockburn.
 7706—Catherine Kaney, 50 Spittal Street, Stirling.
 3004—Ellen Muir, 12 Anderson Terrace, Longcroft.
 458—Bridget M'Guire, 23 Broad Street, Denny.
 5250—Jane Risk M'Gibbon, Faraway Farm, Kippen.
 5452—Mary C. M'Gregor, The Cottages, Fallin.
 521—Margaret M'Phail, Russell Place, Bonnybridge.
 5830—Marion S. MacMillan, 5 The Brae, Cambusbarron.
 1742—Catherine O'Berg, Main Street, Bonnybridge.
 398—Mary Peebles, 1 Church Street, Kilsyth.
 7033—Elizabeth S. Porteous, Mayfield, Bonnybridge.
 2017—Elizabeth Somerville, 4 Woodside Crescent, Fallin.
 2077—Catherine Stanley, 4 Middle Craigs, Stirling.
 2930—Sarah Stewart, Main Street, Buchlyvie.
 1931—Charlotte Thomson, 59 D Block, Fallin.
 557—Helen Thomson, P. O. Buildings, Banknock.
 2842—Mary Traynor, Garden City, Bannockburn.
 456—Mary Wilkie, 60 Allandale, Bonnybridge.
 7053—Margaret R. Wilson, 21 George Street, Stirling.
 7287—Christina Wright, 10 Station Buildings, Kilsyth.

Eastern Stirlingshire.

- 1722—A. Allison, Broomfield Cottage, Polmont.
 695—Elsie Campbell, 34 Mary Street, Laurieston.
 823—Mary Cockburn, East Shieldhill, by Falkirk.
 853—Julia Coleman, 9 Russell Place, Bonnybridge.
 558—Helen Copland, Broomhill, Laurieston.
 441—Jane Cowan, Longdyke, by Falkirk.
 597—Agnes English, Glen Village, by Falkirk.
 745—N. R. Ferguson, Main Street, Carronshore.
 439—Ann Gillon, Mosscastle Road, Slamannan.
 2057—Maggie Gordon, Limerigg, Slamannan.
 999—Janet Harris, Station House, Avonbridge.

- 2333—Mary Law, Craigbank, Avonbridge.
 521—Margaret M'Phail, Russell Place, Bonnybridge.
 7384—Elizabeth M'Phee, Airth.
 1742—Catherine O'Berg, Main Street, Bonnybridge.
 2807—Agnes Rankine, Limerigg, Slamannan.
 446—Agnes Small, Blackbraes, by Falkirk.
 6167—Annie Smith, 7 Burnhead Lane, Falkirk.
 2401—Margaret Stein, 2 Carron Street, Alloa.
 557—Helen Thomson, P. O. Buildings, Banknock.
 456—Mary Wilkie, 60 Allandale, Bonnybridge.
 490—Isabella Wells, Milnquarter, Bonnybridge.
 6518—Isabella Wilson, Block 17, Carronside Street, Carron.
 503—Jessie G. Young, Greylands, Slamannan.

Western Stirlingshire.

- 792—Isabella Dingwall, Redgatehill, Kippen.
 3287—Mary Kelly, 9 Muirhead Street, Kirkintilloch.
 —L. Muggaeh, Drumelzier, Lennoxton.

Burgh of Denny and Dunipace.

- 1842—Susan Chalmers, 132 East Borland, Denny.
 3300—Jean Hendry, Stoneywood, Denny.
 458—Bridget M'Guire, 23 Broad Street, Denny.
 3598—Elizabeth Ferguson, Anchor Cottage, Dunipace.

Burgh of Bridge of Allan.

- 591—Christian F. Pringle, Queen's Buildings, Bridge of Allan.

Births in Area.

Total number of births during 1928—1838.

Total number of deaths of new-born children (within ten days) during 1928—52.

Actual number of births attended by Midwives during 1928—565.

Actual number of deaths of new-born children (within ten days) occurring in the practice of Midwives during 1928—7.

Actual number of cases not attended by a Doctor or Midwife during 1928 :—Births, Nil ; Deaths, Nil.

Cases of Ophthalmia Neonatorum.

Total number of cases during 1928—6.

Actual number of cases occurring in the practice of Midwives during 1928—Nil.

Actual number of cases occurring where confinement not attended by a Doctor or Midwife during 1928—Nil.

Cases of Puerperal Sepsis.

Total number of cases during 1928—4.

Total number of deaths during 1928—2.

Actual number of cases occurring in the practice of Midwives during 1928—Nil.

Actual number of deaths occurring in the practice of Midwives during 1928—Nil.

Actual number of cases occurring where confinement not attended by a Doctor or Midwife during 1928—Cases, Nil; Deaths, Nil.

Cases of Still-Birth (Dead born).

Total number of cases during 1928—61.

Actual number of cases occurring in the practice of Midwives during 1928—6.

Cases of Emergency.

The total number of cases of emergency in which Medical Practitioners have been called in under Section 22 of the Midwives (Scotland) Act, 1915, during 1928, distinguishing the different classes of emergency :

Delayed Labour, 25; Ruptured Perineum, 11; Breech Presentation, 9; Adherent Placenta, 6; Haemorrhage, 3; Eclampsia, 1; Fits, 1; Uterine Inertia, 1; Placenta Prævia, 1; Acute Mania, 1; total, 59.

General Report on the Working of the Act.

As I stated in my report for 1927, with one or two exceptions with regard to which enquiry was being made, any unregistered Midwives in the County now only work under the supervision of a medical man. With regard to the exceptions referred to, I may say that certain unregistered women were brought before the County Maternity Service and Child Welfare Committee charged with having attended births on their own account. After hearing their statements however, the Committee gave serious warning to each of them and decided not to proceed further meantime.

V.—Home Visitation.

	Number Visited.	Total Visits
Infants, ...	1814	3025
Children (1-5 years), ...	3202	3202
Expectant Mothers, ...	33	48
Total, ...	5049	6275

VI.—Voluntary Health Visitors' Reports—

BANNOCKBURN CHILD WELFARE CENTRE.—Nurse Haxby reports that the total number of attendances at the baby clinic throughout the year was 920, and that 79 ante-natal visits were made.

FALLIN CHILD WELFARE CENTRE.—At this clinic the number of attendances was 298 and the visits paid by Nurse MacGregor numbered 316. At Christmas time the usual treat for mothers and babies was given, and the Committee hope to give the mothers a little outing during the summer.

DRUMBOWIE AND AVONBRIDGE CHILD WELFARE CENTRE.—Mrs Walker, secretary, informs me that the number of meetings at the Standburn Centre was 21, and the total attendances 344, giving an average of over 16 present at each meeting. The number of new enrolments was 40. During the month of July and the first half of August the meetings were not held. Mrs. Walker, who is leaving the district, is succeeded in the secretaryship by Mrs. Calder.

VII.—Ante-Natal Consultations—

(Number of weekly sessions and duration of each session should be stated).

- (a) Total number of expectant mothers attending—None.
- (b) Total number of attendances—None.
- (c) Classified summary of conditions found—None.
- (d) Number of cases (i.) referred to ante-natal ward—None.
(ii.) referred to family doctor—None.
(iii.) treated at clinic—None.

VIII.—Post-natal and other Consultations.—

Number of attendances—None.

IX.—Child Welfare Consultations.—

(Number of weekly sessions and duration of each session should be stated).

- (a) Number of children attending (i.) under 1 year of age—None.
(ii.) over 1 year of age—None.
- (b) Total number of attendances (i.) under 1 year of age—
(ii.) over 1 year of age—
- (c) Illnesses recorded. (Special information to be given in regard to prevalence of rickets).

X.—Special Treatment Centres—

(1) Teeth—

- (a) Number of attendances (i.) mothers, 1; (ii.) children, 1.
- (b) Number of dentures supplied—None.
- (c) Classified summary of conditions remedied (i.) mothers—Caries, 1; (ii.) children—Caries, 1.

(2) Eyes—

- (a) Number of attendances, 20.
- (b) Classified summary of conditions remedied, 17 Strabismus; 2 Blepharitis, 1 other.

(3) Other ailments—

- (a) Number of attendances—None.
- (b) Classified summary of conditions—None.

(4) Ultra-Violet Light Clinic—

- (a) Number of attendances—109.
- (b) Number of Cases—19.
- (c) Note of conditions treated and results obtained—Marasmus: all improved.

XI.—Day Nurseries, Kindergartens, and Play-Centres—

- (a) Number of attendances (i.) under 1 year of age—None.
(ii.) over 1 year of age—None.
- (b) Charges made—None.

XII.—Food and Milk—

- (a) Number of persons in respect of whom applications were made for food or milk (i.) mothers, 164; (ii.) children, 116.
- (b) Number of cases certified on medical grounds as requiring food or milk (i.) mothers, 125; (ii.) children, 90.
- (c) Number of cases under (b) certified as necessitous—(i.) mothers, 125; (ii.) children, 90.

XIII.—Measles—

- (a) Number of cases notified. (If notification is in force. If partial notification is in force, this should be stated)—Not notifiable.
- (b) Number of deaths—(i.) from measles, 5; (ii.) from sequelae, Not known.
- (c) Number of cases removed to hospital, 0.
- (d) Number of special domiciliary visits, 117.
- (e) Details of special staff, if any, engaged for epidemics—No special staff.

XIV.—Whooping Cough—

- (a) Number of cases notified—Disease is not notifiable.
- (b) Number of deaths—(i.) from whooping cough, 20 ;
(ii.) from sequelae—Not known.
- (c) Number of cases removed to Hospital, 1.
- (d) Number of special domiciliary visits, 63.
- (e) Details of special staff—No special staff.

XV.—Ophthalmia Neonatorum—

- (a) Number of cases notified (i.) by doctor, 6.
(ii.) by midwife, 0.
(iii.) by institution, 0.
- (b) Number of cases in which infection is gonococcal (if known)—Not known.
- (c) Number treated in residential institutions—1.
- (d) Number of cases in which there was appreciable loss of vision—None.

XVI.—Maternity Hospitals or Homes (See note at beginning of this statement.)—

- (1) Ante-natal cases—
 - (a) Number of cases treated—None.
 - (b) Statement of conditions found—None.
 - (c) Statement of results of treatment—None.
- (2) Abortions—
 - (a) Number of cases—None.
 - (b) Results—None.
- (3) Abnormal or complicated confinements—
 - (a) Number of cases—None.
 - (b) Statement of conditions found—None.
 - (c) Results—None.
- (4) Other cases of confinement—
 - (a) Number of normal deliveries (i.) with medical attendance—None.
(ii.) without medical attendance—None.
 - (b) Number of instrumental deliveries (exclusive of those appearing under (3))—None.
 - (c) Number of cases of morbidity (B.M.A. standard)—None.

Note.—The British Medical Association include within the term “Puerperal Morbidity” all conditions in which the temperature reaches a height of 100 degrees fahrenheit on two of the bi-daily readings from the end of the first to the end of the eighth day after delivery.

- (d) Number of cases under (c) in which delivery was instrumental—None.
- (e) Number of deaths (classified)—None.

- (5) Number of infants born—(i.) alive, None ; (ii.) still—None.
- (6) Number of deaths of infants under 1 week—None.
- (7) Number of cases of puerperal fever removed from Institution—None.

It may be stated that under arrangement, 12 Ante-natal cases were treated in Glasgow Royal Maternity Hospital.

XVII.—Homes for Unmarried Mothers before and after Confinement—

Number of cases received—None.

XVIII.—Hospitals for Sick Children—

- (a) Number of admissions—None.
- (b) Conditions treated—None.
- (c) Results of treatment—None.
- (d) Average period of residence—None.
- (e) Notes as to infectious disease (if any)—None.

XIX.—Convalescent Homes—

- (a) Number of cases treated : —
 - (i.) Mothers—None
 - (ii.) Children under 1 year of age—None.
 - (iii.) Children over 1 year of age—None.
- (b) Average duration of residence—None.
- (c) Notes as to infectious disease (if any)—None.

XX.—Boarding-out—

- (a) Number of cases (i.) under 1 year of age, (ii.) over 1 year of age—None.
- (b) Remarks as to reasons for boarding-out under Local Authority—None.

XXI.—Home Helps—

- (a) Number employed—None.
- (b) Number of cases taken—None.
- (c) Average period of assistance—None.

XXII.—Educational—

XXIII.—Note of Agencies, not referred to above, associated with Scheme—None.

XXIV.—Other Provisions (e.g., treatment of pneumonia and bronchitis ; after-care of cases of poliomyelitis anterior acuta)—None.

TREATMENT OF VENEREAL DISEASES.

The accommodation to be provided for the treatment of these diseases in connection with the new Stirling Royal Infirmary is not yet available, so that the work is still carried on in the

building adjacent to the old infirmary buildings. The days and hours for attendance at the clinic are as before, namely :—

MONDAY, ...	5.30 to 7 p.m.,	... males.
WEDNESDAY, ...	5.30 to 7 p.m.,	... males.
THURSDAY, ...	5.30 to 7 p.m.,	... females.

From the annual return by the Medical Officer of the Centre for the year ending 15th May, 1929, I notice that the total attendances at the clinic were 9369, as compared with 7397 in the previous year. This is the highest figure for attendances to date. The number of persons who attended was 673, which is also a record, and is 142 more than in the previous year. Of that number (673) 148 were found to be suffering from conditions other than venereal, so that the actual number of specifically infected persons treated at the Centre was 525, including those who were in attendance at the end of the previous year. The number of **new** patients was 281. These figures refer to the whole area of treatment which embraces the Counties of Stirling, Clackmannan and Perth. For the County of Stirling alone the number of persons presenting themselves for treatment for the first time during the year was 372, the number found to be actually infected being 235.

The ages of the 525 patients who received specific treatment at the Centre are classified as follows :—

	Males.	Females.	Total.
Under one year, ...	2	2	4
One and under five years,	1	4	5
Five and under 15 years,	10	12	22
15 and under 35 years,	145	28	173
25 years and upwards,	245	76	321
Totals, ...	403	122	525

The total number of pathological specimens examined was 1559. Of these, 1235 were examined by the staff at the Centre, the other 324 (chiefly for Wassermann Reaction) having been examined at the Physicians and Surgeons Laboratory, Edinburgh.

PREVENTION, DETECTION AND TREATMENT OF TUBERCULOSIS.

Deaths and Death-Rates.—In the County of Stirling (exclusive of Burghs) for the year under review, the number of deaths from tuberculosis was 61, of which 38 were due to pulmonary tuberculosis, and 23 to other forms of the disease giving a total death rate of 0.77 per 1000 of population, the death-rate from pulmonary tuberculosis being 0.48 and from non-

pulmonary 0.29. As will be seen from Table IX. the death-rate from tuberculosis has been steadily falling since 1891. In the quinquennium, 1891-95, the death-rate from all forms of tuberculosis was 2.07, the rates for the succeeding quinquennia being 1.80, 1.58, 1.55, 1.34, 1.00, and 0.86 respectively; while for the last three years the death-rates have been as follows:—1926, 0.64; 1927, 0.70; and for 1928, as above stated, 0.77; giving a mean death-rate for the three years of 0.70.

Table IX.—MEAN DEATH RATES FROM TUBERCULOSIS IN QUINQUENNIAL PERIODS, FROM 1891 ONWARDS.

Quinquennial Period	Death Rates per 1000 of Population		
	All forms of Tuberculosis	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis
1891-1895	2.07	1.32	0.75
1896-1900	1.80	1.33	0.47
1901-1905	1.58	1.16	0.42
1905-1910	1.55	1.03	0.52
1911-1915	1.34	0.77	0.57
1916-1920	1.00	0.72	0.33
1921-1925	0.86	0.55	0.31
Year 1926	0.64	0.39	0.25
1927	0.70	0.39	0.31
1928	0.77	0.49	0.29

For the whole of Scotland the Registrar General reports that the death rate from pulmonary tuberculosis was 0.68 per 1000 of population, and that the rate from all forms of the disease was 0.97 per 1000. Both these rates, it is stated, are the lowest yet recorded.

Notification—Pulmonary and Non-Pulmonary Tuberculosis.—Table X. is a copy of a statistical Return asked for by the Department of Health, Part I. of which gives the figures for notifications under various age groupings. This table refers to the area under the County Treatment Scheme which comprises the whole County with the exception of the Burghs of Falkirk and Stirling. It will be seen that the total notifications numbered 192 of which 78 were of pulmonary tuberculosis and 114 of non-pulmonary tuberculosis. Part II. of the table shows the number of persons who were known to be suffering from tuberculosis as at 31st December, 1928, from which it will be seen that there were 589 persons suffering from pulmonary tuberculosis and 767 from other forms of tuberculosis, a grand total of 1356 persons, out of a total population of approximately 110,000. The final Part of the statement shows the numbers treated in Sanatoria or other institutions.

TABLE X.—TUBERCULOSIS—STATISTICAL RETURNS, 1928.

I.—RETURN OF CASES OF TUBERCULOSIS notified during the Year ended 31st December, 1928.

AREA—All Stirling County (excluding Falkirk and Stirling Burghs).

NUMBER OF CASES NOTIFIED AS SUFFERING FROM TUBERCULOSIS										No. of Cases notified during year in which diagnosis of Tuberculosis has been confirmed by M.O.H. or V.O.
		Under 5	5 and under 10	10 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 65	65 and upwards	Total
Pulmonary*	...	1	2	4	16	9	4	9	...	45
	...	1	1	5	10	8	6	2	...	33
Non-Pulmonary	...	17	18	8	7	2	2	1	...	55
	...	11	9	12	16	8	...	2	1	59

*Where a case is notified as suffering from both Pulmonary and Non-pulmonary Tuberculosis, it is included under "Pulmonary" only.

II.—RETURN OF NUMBER OF PERSONS RESIDENT IN THE AREA AT 31st DECEMBER, 1928, WHO WERE KNOWN TO BE SUFFERING FROM TUBERCULOSIS.

NUMBER OF KNOWN CASES											
		Under 5	5 and under 10	10 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 65	65 and upwards	Total	
PULMONARY—											
1. Tubercle Bacilli found ...	{ Males ... Females ...	...	...	3 8	17 20	18 19	13 2	11 4	..	62 53	
2. Tubercle Bacilli not found ...	{ Males ... Females ...	5 4	26 18	28 34	80 41	66 48	29 24	48 21	1 1	283 191	
Pulmonary Total ...		9	44	73	158	151	68	84	2	589	
NON-PULMONARY—											
1. Abdominal ...	{ Males ... Females ...	34 32	27 26	9 7	14 9	7 8	1 2	1 2	...	93 86	
2. Spine ...	{ Males ... Females ...	3 2	5 1	2 3	5 3	...	2	...	...	17 10	
3. Bones and Joints (exclusive of Spine) ...	{ Males ... Females ...	26 20	20 11	20 18	30 17	14 5	6 4	2 1	...	108 76	
4. Superficial Glands ...	{ Males ... Females ...	19 20	45 40	30 23	35 14	12 11	3 6	1 2	1 2	146 118	
5. Lupus ...	{ Males ... Females ...	...	1 3	4 3	3 4	1 7	4 5	...	...	13 21	
6. Other Parts or Organs ...	{ Males ... Females ...	16 6	7 3	6 5	6 4	7 5	3 7	2 2	...	47 32	
Non-Pulmonary Total ...		178	189	127	134	78	43	15	3	767	
Pulmonary and Non-Pulmonary Total ...		187	233	200	292	229	111	99	5	1356	

III.—RETURN SHOWING THE NUMBER OF CASES WHICH RECEIVED TREATMENT UNDER THE TUBERCULOSIS SCHEME IN SANATORIA OR OTHER INSTITUTIONS DURING THE YEAR ENDED 31st DECEMBER, 1928.

NUMBER OF PATIENTS					
	In Institutions on January 1	Admitted during the Year	Discharged during the Year	Died in the Institutions	In Institutions on December 31
Pulmonary ...	Adults { Males ... Females ...	21 10	38 22	33 17	3 5
	Children { Males ... Females ...	...	4 5	4 4	...
	Adults { Males ... Females ...	4 3	14 12	14 13	1 ...
	Children { Males ... Females ...	3 4	18 25	19 27	1 1
Non-Pulmonary					
Total ...		45	138	131	41

Pulmonary Tuberculosis.—The number of patients admitted to institutional treatment during the year was 69, while at the beginning of the year there were in addition 31 patients remaining from the previous year under treatment in the various institutions, making a total of exactly 100. Of these, 72 were dealt with at the Ochil Hills Sanatorium; 11 at Bannockburn Hospital; 8 at Camelon Hospital; 4 at Lennox Hospital; 4 at Stirling Royal Infirmary, and 1 at a Sanatorium in England (by private arrangement). Of the total, 58 were discharged, 8 died, and 34 remained under treatment at the end of the year.

The following is a note of the comparative results of treatment as indicated at the time of discharge:—Disease apparently arrested, 2; very much improved, 9; much improved, 9; improved, 29; and not improved, 6.

The other three patients were discharged at their own request a few days after their admission.

As stated in my last report, an increase of the patient's weight is almost invariably noted in those cases where the general health has improved.

Non-Pulmonary Tuberculosis.—The total number of cases of tuberculosis (other than pulmonary) treated in the above institutions and also in Falkirk Infirmary during 1928 was 83.

Domiciliary Treatment of Tuberculosis (all kinds).—This heading refers to patients who were being treated at home and to whom an allowance of extra nourishment, e.g., milk, eggs, cod liver oil, etc., was given at the cost of the Tuberculosis Committee. Such grants are only given to persons in more or less necessitous circumstances to whom a little extra nutriment in addition to their ordinary maintenance is really required as part of their treatment for the disease. Throughout the year 111 persons in all were given such a grant, for periods not exceeding 12 weeks, although in many cases the grant was renewed from time to time on the advice of the medical attendant. Two patients received a grant to the value of 7/- per week, one to the value of 6/- per week, 13 to the value of 5/- per week, 70 to the value of 3/6 per week, 2 to the value of 3/- per week, 17 to the value of 2/6 per week, and 6 to the value of 1/9 per week; and the average period for which the grants were given works out at approximately 22 weeks. At the end of the year the number of persons on the domiciliary treatment roll was 57.

It is of course impossible to give figures showing what actual improvement has taken place in the health of these patients as a result of domiciliary treatment. Nevertheless, definite benefit has undoubtedly been noted in a majority of the cases at the periodic visits of the medical staff.

DIABETES—PROVISION OF INSULIN.

In accordance with arrangements made under the Public Health (Scotland) Amendment Act, 1925, referred to in my last Annual Report, the number of new applications for free supplies of the drug insulin during 1928 was seven. In addition four applications for continuation of the supply were made, and at the end of the year the number of persons in receipt of free insulin was nine.

The dose varied from 10 units to 60 units per day and the total amount ordered during the year was 42,500 units.

RIVERS POLLUTION PREVENTION.

There has been little to complain of with regard to pollution of the rivers and streams within the County during the past year.

On the Bonny Water, one of the chief sources of pollution was the coal washing plant at the Banknock Livingstone Pit, but this colliery has not been working for some considerable time.

On the Carron there is occasionally some pollution from the paper mills in spite of the fact that the owners endeavour to have every reasonable precaution taken to prevent such pollution.

In the case of the River Kelvin, there is now so little done at the mills and dyeworks in the Western District that practically no pollution takes place from that source.

From the point of view of the angler it is no doubt gratifying to see such comparative freedom from pollution of the rivers, but most people, I think, would rather see the collieries and mills in full working order again.

FOOD AND DRUGS ACTS.

Over the whole County, excluding Burghs, the number of samples taken for chemical analysis was 184, of which 71 were from the Central District, 73 from the Eastern District, and 40 from the Western District. Of these, 172 were certified to be genuine and 12 as not genuine. Eleven of these, however, were merely "test" samples, taken informally, so that no proceedings could be taken, but warning was given in each case. The other non-genuine sample was one of sweets, and in this case also a warning was given, no proceedings being taken. Table XI. shows the various samples taken from each District.

TABLE XI.—SAMPLES TAKEN UNDER THE SALE OF FOOD AND DRUGS
ACTS DURING THE YEAR 1928.

Nature of Samples	Central District		Eastern District		Western District	Total
	North	South	North	South	District	
Butter	4	3	1	1	1	10
Cheese	2	3	1	...	1	7
Coffee	...	...	...	...	1	1
Cream	...	...	1	...	...	1
Flour	1	...	1	2	1	5
Lard	1	3	2	...	1	7
Margarine	5	4	2	1	1	13
Milk (Sweet)	10	16	20	11	22	79
Milk (Skimmed)	...	...	2	...	...	2
Oatmeal	...	...	...	1	1	2
Pepper	3	...	1	...	...	4
Sugar	4	...	...	1	...	5
Tea	...	...	...	1	1	2
Miscellaneous... ..	12	...	6	18	10	46
Total	42	29	37	36	40	184
Certified Genuine	40	27	36	35	34	172
Certified Not Genuine	2	2	1	1	6	12
Proceedings Taken ...	0	0	...	0	0	0
Proceedings Successful	0	0	...	0	0	0

DISTRICT REPORTS.

CENTRAL DISTRICT.

HOUSING.

New Buildings—Northern Area.—Fifteen sets of plans were passed by the Committee, seven of these being for new houses and eight for renovation, alterations, or additions to existing houses. The number of new dwellings provided for in the seven plans for new buildings was 34 (23 of which are under the Committee's Housing Scheme at Bannockburn), and of these, one was of one apartment, 24 were of three apartments, 4 of four apartments and 5 of more than four apartments. The dwelling of one apartment consisted of a temporary watchman's hut at a quarry. Two of the plans for renovation and alteration were submitted under the Housing (Rural Workers) Act, 1926.

Southern Area.—The number of plans submitted to and approved by the Committee was eleven, five of which were for new dwelling houses, five for alterations or additions to existing houses, and one for alterations to a church at Plean. The five plans for new buildings included 29 dwellings, 22 of which were of three apartments, 4 of four apartments, and 3 of more than four apartments. Of the 29 new dwelling houses, 20 were under the District Committee's Housing Scheme at Dennyloanhead, all being of three apartments.

Local Authority's Housing Schemes.—Again I am indebted to Mr. Glass for supplying me with a statement of the progress of the Committee's Housing Schemes. The statement also includes some particulars regarding houses built by private enterprise under the subsidy Scheme.

Mr. Glass writes: "For the year ended 31st December, 1928, housing progress, under the Housing and Financial Provisions Act, 1924, was as follows:—

Site.	Completed			Uncompleted			Total.
	3 Apart.	4 Apart.	5 Apart.	3 Apart.	4 Apart.	5 Apart.	
Fallin	22	...	...	...	...	...	22
Queenzieburn (Central District Committee)	30	...	...	...	...	...	30
Queenzieburn (for Messrs. Baird & Co., Ltd.) ...	10	...	...	...	...	...	10
Dennyloanhead ...	20	...	...	...	...	...	20
Totals,	82	...	...	...	...	...	82

" It will thus be noted that 82 houses were completed during the year. Of these, 62 were under construction at the end of the previous year, which leaves only 20 houses as the number put in hand and completed during the year. In addition to the houses built at Dennyloanhead, 23 houses were proposed for Bannockburn and Schedules prepared and sanction given to proceed, but difficulty was experienced in securing a site with the result that building operations were delayed and any further housing at Bannockburn will form a subject for a future report. The uncertainty with regard to Subsidy was primarily responsible for the small number of houses undertaken during the year, and the same uncertainty was also responsible for speeding up the completion of the houses undertaken.

"Under the Housing, etc., Acts, 1923, 1924, and 1925, Certificates qualifying for the Subsidy of £100 per house have been issued as follows :—

	No. of Houses
Certificates " A " issued authorising the erection of houses for Subsidy by private Builders,	8
Certificates " B " being the final Certificate authorising payment of £100 Subsidy,	21

" The following particulars give the whole extent of private building for which Subsidy has been approved and granted since the commencement of the Acts.

Type.	No. of houses for which Certificate " A " has been granted,			Total.	No. of houses for which Certificate " B " has been granted,			Total.
	3 Apart.	4 Apart.	5 Apart.		3 Apart.	4 Apart.	5 Apart.	
ONE-STOREY HOUSES.	12	11	...	23	11	11	...	22
TWO-STOREY HOUSES.	12	15	28	55	12	12	27	51
FLATS.	24	...	...	24	22	...	...	22
	48	26	28	102	45	23	27	95

" Under the Scheme for Assistance by way of Grant under the Housing (Rural Workers) Act, 1926, three applications have been received and approved for payment of grants amounting to £264 in all.

" The following table shows the position up to the 31st December, 1928, of the whole of the Housing undertaken by the Committee under the Housing Acts, 1919, 1923, 1924 and 1925.

LOCAL AUTHORITY'S SCHEME.

Site.	Act.	3 apts.	4 apts.	5 apts.	Rentals per Annum.			Average Cost per House.			Total No. of Houses.
					3 apts.	4 apts.	5 apts.	3 apts.	4 apts.	5 apts.	
Causewayhead, Cambusbarron, East Plan, Bannockburn—	1919 1919 1919	10 10 18	18 10 12	2 ... 2	£22 £22 £19	£26 £26 £23 10/	£30 ... £28	£ 71 2 9 910 2 1 893 4 11	£ s. d. 1002 5 6 1003 15 6 986 5 6	£ s. d. 1113 8 6	30 20 32
1st Development, Bonnybridge (High- land Dykes)—	1919	28	22	...	£19	£23 10/	£28	831 11 9	916 17 4	1042 15 1	50
1st Development, 2nd Development, Cowle—	1919 1919	3 14	7 2	... 2	£20 10/ £20 10/	£24 10/ £24 10/	... £28 10/	763 19 2 404 0 2	854 16 11 452 9 5	... 540 2 7	10 18
1st Development, Bannockburn—	1919 1923	17	3	...	£17 10/	£22	...	397 14 10	411 5 1	...	20
2nd Development, Highland Dykes—	1924	33	8	2	£19	£23 10/	£28	439 2 8	481 18 0	543 18 1	43
3rd Development, 4th Development, Cowie—	Do. Do.	18 4	4 ...	... ...	£20 19/ £20 10/	£24 10/ ...	... ...	448 1 11 450 6 11	478 17 8 ...	... ...	22 4
2nd Development, Haggs, Banton, Kippen, Buchlyvie, Fallin, Queenzieburn, Queenzieburn, Dennyloanhead—	Do. Do. Do. Do. Do. 1923 1924 1925	10 25 12 2 ... 22 30 10	2 4 ... 2 4 ... ... ...	... ... ... ... ... ... ... ...	£17 10/ £17 10/ £17 10/ £19 £20 3/ ...	£22 £22 ... £23 10/ ... ... ... ...	... ... ... ... ... ... ... ...	441 7 6 434 4 0 435 0 0 480 6 8 456 2 10 445 0 0 447 0 0 447 0 0	481 3 0 487 1 5 ... 518 4 10 ... ... ... ...	... ... ... ... ... ... ... ...	12 29 12 4 4 32 30 10
1st Development, Total No. of Completed Houses,	1925	200	94	8	£20 10/	...	...	112 0 0	...	...	20 392

SUFFICIENCY OF WORKING CLASS DWELLINGS AND HABITABILITY OF EXISTING DWELLINGS.

The position as at the end of 1927 was that a total of 666 houses had been estimated by me in 1926 to be required to relieve overerowding and to replace houses which could not be made habitable at reasonable expense. To meet that deficit the local Authority had erected 312 houses while the number erected by private enterprise was 183. In addition the Local Authority had in progress or in contemplation another 62, giving a total of 557.

During the year under review, the 62 houses above-mentioned as being in progress were completed, together with a further instalment of 20 houses. In addition 20 new houses were provided by private enterprise, making a grand total of 597 houses provided since 1919 to meet the estimated deficit of 666 houses.

The size of the houses provided are as follows:—Four houses of one apartment; five houses of three apartments; 368 houses of three apartments; 154 houses of four apartments; and 66 houses of more than four apartments.

Overcrowding at Fallin.—As on a former occasion I caused a house to house inspection to be made at Fallin. The result showed that there were 9 houses of two-apartments and one of three-apartments occupied in each case by two families. So far as 8 of these were concerned they could not be said to be overcrowded, had the limit of occupancy of three persons per apartment been taken as laid down by the Royal Commission. Two of the houses however were overcrowded on this standard and one of these was overcrowded to the extent of $1\frac{1}{2}$ persons even although the limit of occupancy had been taken as four persons per apartment. In the case of houses occupied by one family, 26 were found to be overcrowded taking three persons per apartment as the standard, and three of these were overcrowded even although four persons per apartment had been the standard adopted.

In 1924, 52, or exactly double the number of houses occupied by one family, were shown to be overcrowded.

Housing Acts.—The following is a copy of a Report sent to the Scottish Board of Health, for the year ended 31st December, 1928, on proceedings taken as regards the Inspection, Improvement, and Closure of Dwelling-houses:—

A.—HOUSING (INSPECTION OF DISTRICT) REGULATIONS, 1928.

1. Number of dwelling-houses inspected	...	13
2. Number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation	... ..	13

3. Number of representations made to the Local Authority with a view to the making of closing orders	...	...	...	...	13
4. Number of dwelling-houses in respect of which closing orders were made	...	...	...	...	13
5. Number of dwelling-houses the defects in which were remedied without either the making of closing orders or the service of notices under Section 3 (1) of the Housing (Scotland) Act, 1925	...	...	...	...	—
6. Number of dwelling-houses which after the making of closing orders were put into a fit state for human habitation	...	...	...	...	—
B.—HOUSING (SCOTLAND) ACT, 1925.					
1. Number of dwelling-houses in respect of which notices were served under Section 3 (1)	...	...	...	...	—
2. Number of dwelling-houses rendered fit for human habitation under Section 3 (1)	...	...	...	...	—
3. Number of dwelling-houses in respect of which closing orders were deemed to have become operative under Section 3 (1)	...	...	...	...	—
4. Number of dwelling-houses rendered fit for human habitation by the Local Authority under Section 3 (2)	...	...	...	...	—
5. Number of cases where intimations were given under Section 20 (1) as to insufficient water-closet accommodation :—					
(a) Cases where requirement complied with by owners	...	...	...	...	23
(b) Cases where works carried out by Local Authority after failure of owners to do so	...	...	...	...	—
(c) Cases still pending	...	...	...	...	83*
6. Number of houses of (a) one apartment, and (b) two apartments for the erection of which the consent of the Local Authority has been given in terms of Section 111	...	...	...	...	—
C.—HOUSING, TOWN PLANNING, &C. (SCOTLAND) ACT, 1919.					
1. Number of cases where notices were served under Section 40 (1) to provide dwelling-houses with water supply :—					
(a) Cases where requirements complied with by owners	...	...	...	...	19
(b) Cases where works carried out by Local Authority after failure of owners to do so	...	...	...	...	—
(c) Cases still pending	...	...	...	...	56*

*The great bulk of these is made up of cases in which intimation was given in 1927.

WATER SUPPLY.

Generally the water supply to the Central District is of excellent quality and quite sufficient for all purposes.

A proper supply has not yet been introduced to Rosehill Cottages, but I had a definite promise that this matter will be attended to soon.

WATER ANALYSES.

Six samples of water were taken for analysis during the year, the results being tabulated in Table XII.

Sample No. 1 was taken from a dip well at Langlands Farm, Denny, in connection with the question of a water supply to the farm. As the well water was not suitable I strongly advised the introduction of gravitation water. This has now been done.

Nos. 2, 3, 4, and 5 were sampled with a view to ascertaining the fitness of the water for domestic use, complaint having been received in one or two cases of sediment. All the samples, however, were found very satisfactory on analysis, but in the case of No. 5 (from Bankend Farm, Denny), there was a small amount of iron in solution which of course makes it rather objectionable for the washing of white clothes.

The sample from the pump well, at Muirhead, Denny, (No. 6 in the table), was found contaminated, and the owner has been called upon to provide a wholesome supply. There should be no difficulty here as the Stirlingshire and Falkirk water main is only a short distance away.

Table XII.—CENTRAL DISTRICT—WATER ANALYSES (IN GRAINS PER GALLON)—1928.

No.	Date of Report	Where Taken.	Mineral Matter	Organic Matter	Total Solids	Nitrates	Free Ammonia	Albuminoid Ammonia	Total Ammonia	Temporary Hardness	Permanent Hardness	Total Hardness	Colour (Loch Katrine Water=10)	Degree of Sewage Contamination
1	4/5/28	Dip Well, Langlands Farm, Denny	6.84	.88	7.72	.33	.004	.010	.014	4.72	1.15	5.87	8	1 in 80
2	12/5/28	Greenfoot Farm, Gargunnoch	8.47	.30	8.77	.04	.001	.007	.008	5.51	2.03	7.54	6	0
3	20/6/28	Stand Well, Mill Road, Cambusbarron	6.02	.30	6.32	...	...	.005	.005	1.92	1.33	3.25	0	0
4	15/8/28	Norrie's Well, Torwood, Dunipae Parish	10.48	.25	9.73	...	...	.004	.004	16.34	.90	17.24	0	0
5	15/8/28	Stone Conduit, Bankend Farm, Denny	9.61	.60	10.21	...	.002	.007	.009	6.92	.41	7.31	5	0
6	29/10/28	Pump Well, Multhead, Denny	11.52	.80	12.32	1.16	.013	.018	.031	3.92	4.60	8.52	15	1 in 20

*NOTE.—Messrs. Tatlock & Thomson's regular method of stating their opinion of a water as to Sewage Contamination is as follows:—"It may be regarded as being equal to a mixture of one part of average sewage with.....parts of pure water which had been filtered through earth till clear." The figures in the fourth last column of the table give the result according to this method

DRAINAGE.

In the Central District the Special Districts are as follow:—

				Approximate population.	Approximate daily effluent gallons
Bannockburn,	...	...	...	4,500	130,000
Banton,	...	...	...	450	9,000
Bonnybridge,	...	...	...	4,500	130,000
Buchlyvie,	...	...	...	360	7,000
Causewayhead,	...	...	...	1,000	30,000
Cowie,	...	...	...	3,500	70,000
Park Place,	...	...	...	350	10,000
East Plean,	...	...	...	1,400	40,000

In addition to the above, the north end of the village of Whins of Milton has now been formed into a special drainage district, the outfall being into the Stirling Burgh system.

The question of the disposal of Bannockburn sewage by extension of the sewer to the tidal waters of the River Forth or by some other means is presently under consideration.

Otherwise the special districts are as reported on in previous years, and the drainage of the areas is very satisfactory.

Outside these Special Districts there are several places, notably part of Buchlyvie, Kippen, and Cambusbarron, which would be greatly improved by a drainage scheme, if the question of costs could be got over.

SCAVENGING.

Since the end of the year, a special scavenging district has been formed to serve the area of Douglas Terrace, Park Place, and neighbourhood. At Buchlyvie also a special district has been formed, but only for the purpose of providing a coup for material not removed by local farmers.

From the Sanitary Inspectors' reports it can be seen that the scavenging of the district on the whole is fairly well looked after.

NUISANCES.

The number of nuisances formally dealt with by intimation under Section 19 of the Public Health Act was 113. In addition it was possible to have a good many nuisances abated merely by verbal intimation to the person responsible. The nuisances as usual chiefly consisted of full and foul ashpits, choked drains, water closets and wash-houses in disrepair, overcrowding, etc.

SANITARY CONVENIENCES.

In the statement regarding work done under the Housing Acts it will be seen that as a result of intimation under Section 20 (1) of the Housing Act of 1925, the request for the provision of adequate water closet accommodation was complied with in 23 cases, and 83 cases were still pending—intimation in many of these having been given in 1927.

DAIRIES.

In connection with the inspection of dairy herds throughout the district, Mr M'Gregor, the veterinary inspector, reports :

“ In the District there are 177 dairy herds containing 2396 cows, and provisional registration was granted to each of them pending classification under the Dairy Bye-laws. Each herd was inspected at least once during the year when the udder of every cow was examined clinically for disease. In addition to this Statutory Inspection, further examinations were made as opportunity offered throughout the year and in this way, 32 herds were examined twice and 10 three times. In all, 229 dairy inspections were made and 3317 examinations of cows.

“ Seventy-eight cows were found with abnormal udders. Fourteen of these exhibited symptoms that were suggestive of tuberculosis of the udder and bacteriological examination of the milk from these cows was carried out which proved positive for tubercle bacilli in five cases. During the period that the milk was under examination, the provisions of the Tuberculosis Order of 1925 were applied to the suspected cows and the milk from these animals was not permitted to be used for human consumption. The five cows found to be suffering from Tuberculosis of the udder were immediately slaughtered under the above Order and compensation, as laid down by the Order, was paid to their owners.

“ Twenty cows were found suffering from Mastitis in one or more quarters of the udder. In no instance was the milk from the affected quarters being used for human consumption. Owners of affected animals were instructed in the proper disposal of the infected milk and the steps to be taken for the prevention of the spreading of this condition to other cows.

“ Thirty-nine cases of atrophy of the udder were noticed, probably the result of previous mastitis, but as the affected quarters were functionless there was no danger to the milk of the remaining quarters.

“ Induration of a non-tuberculous character was observed in four cows and an eruption involving the teats in one instance

“ In addition to the five cases of tuberculosis of the udder mentioned above, thirteen cows were found suffering from

Tuberculous Emaciation and nine which had a Chronic Cough and definite clinical symptoms of Tuberculosis. These animals were seized and slaughtered under the Tuberculosis Order of 1925, and the owners compensated.

"Thorough disinfection was carried out after the removal of these cases of tuberculosis and the stalls, troughs, and standings, made safe for the introduction of fresh cows to the byre.

During these visits of inspection and especially when a case of tuberculosis was found in the dairy herd, the attention of the owner was drawn to the various methods whereby tuberculosis can be eliminated from dairy herds, and the method best adapted for the individual herd was explained at length.

MILK (SPECIAL DESIGNATIONS) ORDER (SCOTLAND) 1923.

"The herd mentioned in my previous report was again licensed for the production of Grade A. Milk and the conditions laid down in the Order were complied with.

"There is apparently no demand in the District for Graded Milk. Until consumers become educated to its value and are prepared to pay the little extra cost, farmers will not incur the additional expense involved in the production of the higher grades of milk.

"The general condition of the milk cows in the District was good. Concentrates, mostly of foreign origin, are fed during the winter to supplement the foods grown on the farm, and during the summer months the cows are generally at grass. No instances were observed during the year of the fodder or diet adversely affecting the quality of the milk.

"While it is true that many farmers give extra foodstuffs to their heavier milking cows, little effort is made to balance the ration and profit by the knowledge now available as the result of recent research into animal dietetics. It is to be regretted that very few milk producers in the Central District keep accurate records of the product of their cows, as reliable information on this point is the basis of economical milk production.

"The standard of cleanliness of the cows is good on the whole but varies somewhat in the various byres, and, like the cleanliness of the milk produced in the District, is in great measure governed by the personal interest of the farmer and his wife.

"No occasion arose during the year for taking action under Section 21 and the tuberculin test was not applied to any herd under Section 22 of the Act of 1914.

"In addition to tuberculosis which is undoubtedly the greatest scourge that affects dairy herds at present, I have

been impressed by the loss sustained by the dairy industry in the County from Contagious Abortion and Johne's Disease.

"The problem of tuberculosis in dairy cows, its control and ultimate eradication, is being tackled energetically and good results are being noticed by competent observers in the realm of public health; but there will require to be a strong demand made by dairy farmers for an organised campaign against Contagious Abortion and Johne's Disease, as, without their assistance and goodwill, the necessary measures would prove fruitless. These two diseases are not communicable to man; but the losses incurred through them, in addition to the loss from tuberculosis, have an appreciable effect on the cost of milk and are ultimately borne by the consumer."

A great many improvements are being made on the dairy premises in the district in order to bring them up to the standard of the new Byelaws. Roughly, about sixty dairies cannot yet be said to comply reasonably with the byelaws, but it is hoped that by the end of another year this number will be much reduced.

The Grade A farm referred to in the Veterinary Inspector's report is that of Mr. Robert M'Farlane, Oxhill, Buehlyvie.

SLAUGHTER-HOUSES AND MEAT INSPECTION.

The number of licences renewed was eleven, and a new licence was granted for a new bacon factory at Causewayhead.

On inspection, the places were all found to be reasonably well kept. The days and hours of slaughtering at the various places are now fixed by the local Authority in terms of the Meat Inspection Regulations (Scotland) 1923.

Under the new Slaughter of Animals (Scotland) Act, 1928, which came into operation in January, 1929, sixteen persons have been licensed to slaughter or stun animals in accordance with the provisions of this Act, and a list of these persons has been given to the Chief Constable for his use.

INFECTIOUS DISEASE.

Exclusive of Chickenpox, the total number of cases of infectious disease notified was 323, as compared with 300 in 1927, 344 in 1926, and 442 in 1925. Tables XIII. and XIV. give details with regard to the various diseases notified, the parishes from which they were notified, the age-grouping of the patients and the numbers treated in Hospital.

Scarlet Fever.—Seventy-five cases of scarlet fever were notified as compared with 93 in 1927 and 160 in 1926. The cases

were distributed as follows :—33 in St. Ninians parish, 20 in Denny parish, 13 in Logie parish, 5 in the parish of Kilsyth, 3 in the parish of Dunipace, and 1 in Kippen parish. Of the 75 cases, 69 were removed to hospital. Only 1 of the cases proved fatal.

Diphtheria.—The number of diphtheria cases was 111 as compared with 70 in the previous year. Most of the cases were in the parish of St. Ninians, as will be seen from the Table. All the cases were removed to hospital, and two died.

Enteric Fever.—There was one case of enteric fever, notified from Gargunnoch. The case was isolated at home and recovered.

TABLE XIII.—CENTRAL DISTRICT.—CASES OF INFECTIOUS DISEASE COMING TO THE KNOWLEDGE
OF THE MEDICAL OFFICER OF HEALTH DURING THE YEAR 1928.

PARISH	Smallpox	Diphtheria and Membranous Croup	Erysipelas	Scarlet Fever	Typhus Fever	Enteric Fever	Continued Fever	Puerperal Fever	Cerebro-Spinal Fever	Ophthalmia Neonatorum	Infective Jaundice	Malaria	Dysentery	Chickenspox	Infantile Paralysis	Acute Primary Pneumonia	Acute Influenzal Pneumonia	Encephalitis Lethargica	Tuberculosis		Total
																			Pulmonary	Non-Pulmonary	
Denny ...	...	17	6	20	...	...	...	1	...	1	...	...	...	7	...	6	...	1	2	12	73
Dunipace ...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	4
Gargunnoch ...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	4	3	...	6	...	3
Kilsyth ...	...	5	3	5	...	...	...	...	...	1	...	...	...	11	...	1	2	...	1	1	30
Kilpen ...	...	1	5	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	23
Logie ...	...	8	...	13	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	27
St. Ninians ...	...	80	12	33	...	...	...	...	...	...	...	1	...	35	...	16	4	1	6	30	218
Stirling ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	5
Total ...	...	111	27	75	...	1	...	1	..	2	...	1	...	57	...	28	11	3	17	46	380
Removed to Hospital	...	111	...	12	...	...	...	1	...	1	...	...	...	...	...	...	...	...	11	28	221

Tuberculosis.—The number of notifications was 63, of which 17 were cases of pulmonary tuberculosis. As the treatment of tuberculosis comes under a County Scheme, details are given in the County part of this Report.

The other diseases notified included 27 cases of Erysipelas, 1 of puerperal fever, 2 of ophthalmia neonatorum, 57 of chickenpox, 1 of malaria, 3 of encephalitis lethargica, and 39 of pneumonia.

Non-notifiable Infectious Diseases.—As I have mentioned in previous reports, much assistance is given by Headmasters of Schools in the way of bringing to my notice cases of measles, mumps, and whooping cough. The number of cases coming to my knowledge in this way was—Measles, 120; and whooping cough, 12.

School Closure on Account of Infectious Disease.—On only one occasion was it found necessary to resort to closure of a school. The school concerned was a small one, at Torwood, which was closed from the 2nd to 13th of February with the view of preventing the spread of measles and whooping cough.

BANNOCKBURN HOSPITAL.

Statistics.—During the year under review, 256 cases of infectious disease were admitted to Bannockburn Hospital, as compared with 248 in 1927, 265 in 1926, and 327 in 1925. Of the 256 cases, 213 were from Central District, 42 from the Burgh of Denny and one from the Western District.

The number of cases in hospital at the beginning of the year—remaining from the previous year—was 27 and at the end of the year there were 36 still undergoing treatment, so that, as will be seen from Table XV. 247 cases were treated to a termination, the total number of days' residence being 10,054, which is equal to an average residence of 40·7 days per patient. Throughout the year the hospital accommodated an average of 28 patients.

Of the cases treated to a termination, 103 were of scarlet fever with a total residence of 4581 days, giving an average of 44·5 days. Three of the cases proved fatal.

Of diphtheria, 115 cases were treated and three died. The average residence of the 115 cases was 31·7 days.

Twenty-eight patients suffering from Tuberculosis were dealt with, and of these, three died in Hospital. Twenty-three patients were discharged much improved in health, the other two being still under treatment at the end of the year. The duration of treatment of these cases of tuberculosis averaged 61·5 days.

A case of Whooping Cough also was isolated in Hospital and was still under treatment at the end of the year.

Ultra Violet Radiation.—

In all 66 patients received treatment by Ultra Violet radiation, fifty of which were patients suffering from tuberculosis, and 16 were marasmic children sent in for treatment under the County Child Welfare Scheme. Of the patients suffering from tuberculosis, 16 were of tuberculosis of the lungs, 24 were cases of glandular tuberculosis, 7 tuberculosis of the abdomen, and one each of tuberculosis of the hands, leg, and hip respectively.

All the patients improved under the treatment, some very much so.

TABLE XV.—BANNOCKBURN FEVER HOSPITAL, 1928.

	Scarlet Fever		Diphtheria		Enteric Fever		Tuberculosis		Others*		Total	
	Cases	Days' Residence	Cases	Days' Residence	Cases	Days' Residence	Cases	Days' Residence	Cases	Days' Residence	Cases	Days' Residence
Cases remaining, 1st Jan., 1928...	7	378	17	510	...	...	3	320	...	...	27	1208
Admitted during Year	110	4667	117	3398	...	...	27	1531	2	124	256	9720
Total ...	117	5045	134	3908	...	...	30	1851	2	124	283	10,928
Cases remaining, 31st December, 1928 ...	14	464	19	263	...	...	2	130	1	17	36	874
Cases treated to a termination ...	103	4581	115	3645	...	...	28	1721	1	107	247	10,064

*Including Erysipelas, Encephalitis Lethargica, Scabies, and Pneumonia.

VITAL STATISTICS.

Population.—The population of the District as estimated by the Registrar General for the purposes of these statistics is 27,213 and shows a decrease of 252 as compared with the census of 1921. The probability, however, is that there has been an increase in the population since then.

Births and Birth-Rates.—After correction for transfers, the number of births in 1928 was 620, of which 309 were of males and 311 females. This is equal to a birth-rate of 22.8 per 1,000 of population which is 2.5 higher than that for the previous year, but is considerably below the average for the past ten years, namely, 24.8.

Deaths and Death-Rates.—The number of deaths registered in the Central District was 263, which number was increased to 318 by transfers. This gives a death-rate of 11.7 per 1,000, which is just about the average for the past ten years. The rates for these years were:—1918, 12.1; 1919, 9.6; 1920, 10.5; 1921, 11.7; 1922, 11.6; 1923, 11.7; 1924, 13.9; 1925, 13.1; 1926, 11.5; and 1927, 11.0—average, 11.67.

From Tuberculosis the death-rate was 0.77; the rate for pulmonary tuberculosis being 0.51.

The deaths from "The Principal Epidemic Diseases" numbered 24, which gives a death-rate of 0.88. The diseases contributing to this rate were:—Measles, 5 deaths; Scarlet Fever, 1 death; Whooping Cough, 9 deaths; Diphtheria, 2 deaths; and Diarrhoea and Enteritis (under 2 years) 7 deaths.

The Infantile Mortality Rate, i.e., the number of deaths under one year of age per 1000 births, was 68.

Table XVII. gives the details.

TABLE XVII.—CENTRAL DISTRICT.

BIRTHS, MARRIAGES, AND DEATHS DURING THE YEAR 1928

Principal Rates per 1000 of Estimated Population.

	Numbers Registered in District	Transfers		Corrected Number		Uncorrected	Corrected for Transfers	Corrected for Age and Sex Distribution
		Out	In	Both Sexes	Females			
Total Births (including Illegitimate Births)	609	24	35	620	311	22.4	22.8	.....
Illegitimate Births	31	..	13	44	22	.....	7.1	.....
Marriages	138	..	..	..	..	5.1	.....	.....
Deaths	263	7	62	318	147	9.7	11.7	12.7
						.....	0.77	.....
						.....	0.51	.....
						.....	0.88	.....
						68	68	.....

Birth-rate
 Illegitimate Birth-rate per 100
 Total Births
 Marriage-rate
 Death-rate.—All Causes
 " All Tuberculosis
 " Tuberculosis of Respiratory System
 " Principal Epidemic Diseases (asterisked below)
 Infantile Mortality Rate (Deaths under One Year per 1000 Births)

CAUSES OF DEATH (corrected for Transfers).

CAUSES OF DEATH	ALL AGES			AGE										85 and over	
	Both Sexes	Males	Females	—1	1—	5—	10—	15—	25—	35—	45—	55—	65—		75—
*Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	5	3	2	1	4	...	...	...	...	...	...	...	...	...	...
*Measles	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...
*Scarlet Fever	9	4	5	4	5	...	...	...	...	...	...	...	...	...	...
*Whooping-Cough	2	2	...	...	2	...	...	...	...	...	...	...	...	...	...
*Diphtheria	6	3	3	...	...	...	...	1	...	1	...	1	3	...	...
Influenza	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	2	1	1	...	...	2	...	5	2	2	1	...	...	1	...
Tuberculosis of Respiratory System	14	10	4	...	...	2	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	2	1	1	...	1	1	...	...	...	...	...	...	...	...	...
Tuberculosis of Intestines and Peritoneum	2	1	1	...	1	...	1	...	...	...	3	12	12	3	1
Other Tuberculous Disease	3	2	1	...	1	...	...	...	1	...	...	...	...	...	...
Malignant Tumours	33	15	18	...	1	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Meningitis (not Cerebro-Spinal or Tuberculous)	5	3	2	...	4	1	...	...	...	...	...	...	...	...	...
Apoplexy	30	13	17	...	...	...	...	...	...	...	1	6	14	7	2
Heart Disease	33	17	16	...	...	...	...	1	...	1	3	7	10	7	4
Diseases of Arteries	4	3	1	...	...	...	...	...	...	...	...	2	1	1	...
Bronchitis	17	10	7	3	1	...	...	...	...	...	1	1	5	6	...
Pneumonia (all forms)	23	15	8	4	3	...	...	2	...	2	2	4	3	3	...
Other Diseases of Respiratory System	6	3	3	1	...	...	...	...	1	1	...	...	2	1	...
*Diarrhoea and Enteritis (under 2 years)	7	3	4	5	2	...	...	...	...	...	...	...	...	...	...
Appendicitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All Diseases of Liver (not Malignant)	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Nephritis, Acute and Chronic	8	4	4	...	...	...	...	1	1	...	2	1	2	1	...
Puerperal Sepsis	1	...	1	...	...	...	...	4	1	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy and Parturition	4	...	4	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Early Infancy and Malformations	18	13	5	18	...	...	...	...	...	...	...	...	...	...	...
Suicide	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Other Violent Deaths	20	14	6	1	2	2	...	6	...	2	3	3	...	...	1
Other Defined Diseases	53	27	26	5	2	...	3	1	1	4	9	5	9	10	4
Causes Ill-defined or Unknown	5	2	3	...	1	...	...	...	...	...	...	1	2	1	...
All Causes	318	171	147	42	28	9	4	22	7	14	27	47	63	43	12

EASTERN DISTRICT.

HOUSING.

Building Bye-laws.—Twenty-six sets of plans were passed for the Northern area of the District, of which 16 were for new houses. The actual number of new dwellings provided for in these plans was 31, two of these being of two apartments, 19 of three apartments, 5 of four apartments, and five of more than four apartments. The two two-apartment houses and 3 of the three-apartment houses consisted of shops converted into dwellings. The other ten plans were :—two for re-construction of existing buildings, five for additions and alterations, one for a mission hall, one for a picture house and shops, and one for temporary lavatory accommodation.

For the southern part of the District ten sets of plans were submitted to and passed by the Committee, four of which were for new dwelling houses, the actual number of new houses being fourteen. Of these, one was of two apartments, 10 were of three apartments, and three were of four apartments. The two-apartment house consisted of a shop converted into a dwelling house. Five of the plans were for alterations or additions to existing buildings and one for a new byre.

Local Authority's Housing Schemes.—Northern Area.—The twelve houses at Airth which were stated in my last Report to be in course of erection have now been completed. With regard to the houses mentioned in that Report as being in contemplation, they have now (July 1929) all been completed, namely :—

- 8 at Stenhousemuir.
- 8 at Larbert.
- 8 at Carronshore.
- 32 at Bonnybridge and
- 12 at Laurieston.

Southern Area.—In my Report for 1927 I said that the Committee had in contemplation the erection of 92 houses as follows :—12 at Brightons, 22 at Redding, 14 at Polmont, 16 at Glenyards, and 28 at Rumford. With the exception of the houses at Brightons, they had all been completed by the end of 1928. The 12 houses at Brightons have been completed since the end of the year.

Housing Acts.—Report for the year ended 31st December, 1928, on proceedings taken as regards the Inspection, Improvement, and Closure of Dwelling-Houses.

A.—HOUSING (INSPECTION OF DISTRICT) REGULATIONS (Scotland), 1928.

1. Number of dwelling-houses inspected	19
2. Number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation	19
3. Number of representations made to the Local Authority with a view to the making of closing orders	19
4. Number of dwelling-houses in respect of which closing orders were made	19
5. Number of dwelling-houses the defects in which were remedied without either the making of closing orders or the service of notices under Section 3 (1) of the Housing (Scotland) Act, 1925	—
6. Number of dwelling-houses which after the making of closing orders were put into a fit state for human habitation	—
B.—HOUSING (SCOTLAND) ACT, 1925.	
1. Number of dwelling-houses in respect of which notices were served under Section 3 (1)	—
2. Number of dwelling-houses rendered fit for human habitation under Section 3 (1)	—
3. Number of dwelling-houses in respect of which closing orders were deemed to have become operative under Section 3 (1)	—
4. Number of dwelling-houses rendered fit for human habitation by the Local Authority under Section 3 (2)	—
5. Number of cases where intimations were given under Section 20 (1) as to insufficient water- closet accommodation :—	
(a) Cases where requirement complied with by owners	19
(b) Cases where works carried out by Local Authority after failure of owners to do so	—
(c) Cases still pending	9
6. Number of houses of (a) one apartment and (b) two apartments for the erection of which the consent of the Local Authority has been given in terms of Section III.	3
C.—HOUSING, TOWN PLANNING, &C. (SCOTLAND) ACT, 1919.	
1. Number of cases where notices were served under Section 40 (1) to provide dwelling- houses with water supply :—	
(a) Cases where requirements complied with by owners	3

(b) Cases where works carried out by Local Authority after failure of owners to do so	...	...	...	—
(c) Cases still pending	...	...	...	5

In addition to the work done under Part A above, a survey was made during 1928 of houses so defective as to bring them within the scope of a possible "slum clearance" Scheme. The number of houses inspected for this purpose was 499.

PROPOSED "SLUM" CLEARANCE SCHEME.

Near the end of September, in accordance with a request by the Eastern District Committee, I presented a report on "Slum Clearance." The report was in the following terms:—

"In this country practically all houses for the working classes used to be provided by private enterprise, but for years before the Great War housing as an investment had for various reasons ceased to attract capital, so that there was not a sufficient supply of new houses to replace those worn-out, and also to meet the needs of an increasing population.

"During the Great War house building stopped almost entirely. Many houses also fell into disrepair, and others that should have been closed were allowed to be inhabited as there were not sufficient houses to go round.

"In their extremity after the Great War, the Government passed the Housing Act of 1919, by which they and the Local Authorities definitely shouldered the responsibility of providing houses for the working classes.

"Recognising the position I lost no time in instituting a housing survey over the whole County. It occupied about two years. Such a stocktaking was necessary to know exactly where we stood. The report embodying the results of the Survey has been of very great use and indeed has formed the basis of the housing policy of my Local Authorities.

"As a result the Eastern District Committee resolved to initiate a scheme of 600 houses, and the work was undertaken with much enthusiasm. Housing costs, unfortunately, continued to soar, and at length they became so great that the Government called a halt with the Schemes under the 1919 Act before they were completed.

"Because of the continued urgency of the housing problem there were passed the Housing Act of 1923 and also that of 1924, by which both private enterprise and the Local Authorities were encouraged to build under Government subsidy.

"The result has been that up to the end of 1927, 370 houses were completed by the Eastern District Committee, and

374 by private enterprise in the Eastern District. This work is still continuing, the Local Authority having in progress or in contemplation a further instalment of 180 houses.

“The Housing Survey divided the houses into three categories :—

- (1) Houses fit for human habitation ;
- (2) Houses that could at reasonable cost be made fit for human habitation ; and
- (3) Houses that could not at reasonable cost be made fit for human habitation.

“It was impossible, or rather impracticable, to close in a wholesale manner the houses in category (3), but concurrently with the provision of new houses many of the worst of the category (3) houses were closed as they became empty. This policy often presented a difficulty, as no sooner was such a house empty than it became occupied again, because of the cheap rent.

“The District Committee have now made such progress in the provision of new houses for the working classes, as to enable them to tackle properly the problem of the house unfit for human habitation, and hence the remit to me to present a report on so-called “Slum Clearance” in the Eastern District.

“That suggests the question—‘What is a slum?’ *Chambers* defines it as ‘a low, squalid street or neighbourhood.’ *Nuttall* is nearer the usual conception when he defines a slum as ‘a low dirty street or district in a large city occupied by a vagabond class.’

“How did the slums in the large cities originate? Mostly as a result of the great industrial development of the last century, there was such an unprecedented immigration of workers into the cities that the supply of houses was quite insufficient.

“The means of transit also were so inadequate that the workers had of necessity to be housed in the vicinity of the great factories. Houses were therefore congested on comparatively small areas and there was a great extension of the tenement system. Fresh air and sunlight were literally shut out.

“As the factories increased more workers were required—houses became grossly overcrowded so that there existed all the worst features of the tenement system, often with squalor and filth. In many cases there was no proper water supply. In Glasgow, typhus epidemics were common and even cholera appeared. Can it be wondered that the people became more or less demoralised?

“The foregoing is a fairly accurate picture of a city slum of that period. Much has been done to ameliorate or rather to abolish such conditions, but even now city authorities are

spending enormous sums of money to counteract the evils wrought during the period of industrial development.

“The problem in a County like Stirlingshire only mildly resembles what was common in the cities.

“Many of the old properties now to be reported on were also erected during the industrial development, especially in connection with the mining industry. Proprietors in sinking a mine had to erect houses for their workmen, and thus there originated the ‘Miners’ Rows.’ The houses, usually of one storey, were seldom of more than two apartments, and often there was quite a large proportion of ‘single ends.’

“The houses were often built of brick, sometimes of stone. Damp-proof courses were unknown, the walls were plastered on the solid and therefore mostly damp. The bed-places were usually of the recess type and often two in each apartment. Lighting and ventilation were usually defective. Water supplies were usually obtained from pump wells or draw wells, which were even worse. Privy middens were the ordinary type of convenience. Enteric fever was all too common.

“These old houses in the County, although very faulty in construction, are by no means congested, and around them there is free play of fresh air and sunlight. Nature therefore is enabled to do much for the inhabitants—unlike congested city slum areas, where the purifying influences of nature are overtaxed or hindered altogether, this again being reflected in abnormally high death-rates, which have been known to reach over 40 per 1,000.

“Since the passing of the Local Government Act (1889) and especially of the Public Health (Scotland) Act (1897), much has been done in the way of amelioration by providing gravitation water supplies and improved drainage facilities with the result that enteric for years has been almost unknown. The owners in certain areas were found willing to do much to improve their property.

“In the older areas, however, and especially in the southern portion of the district where many of the mines have been worked out and unremunerative pits closed, the houses have been sadly neglected. The owners in some cases would even welcome closure of their houses by the Local Authority in order to get rid of responsibility.

“One often marvels how the people cling to these old mining hamlets, usually travelling long distances to their work, others (unfortunately a large number at present) unemployed and on the dole.

“The people in these houses bear no resemblance to the usual city slum dweller. Most of them, though poor, are highly respectable. Many of them I complimented warmly for their laudable and often successful efforts to make their homes

look nice. In other cases, however, the fight against circumstances has been too much for them.

"Up till now the houses provided under the various housing Acts have been mostly for the more fortunate working classes, but there is a strong feeling in the Local Authority that the time has now arrived when their housing programme must be so shaped as to do something for the people who are less fortunate.

"To get a sufficiently approximate estimate of what is required to be done I asked my Sanitary Inspectors, Mr. Gough and Mr. Macfarlane, to make, each in his own area, a survey of the houses so defective that they might reasonably be included in a "Clearance Scheme."

"This has been faithfully carried out, and a mass of information has been presented in tabular form."

(As the tabulated information presented was somewhat voluminous, however, I am merely giving here the summaries by the Sanitary Inspectors).

SOUTHERN DIVISION SUMMARY. TABLE 1.

No.	Parish.	No. of Properties.	Number of Occupied Houses.					Number of Unoccupied Houses.					Total No. of Houses.	Total Valuation of Properties	Inmates.			Population Living in Overcrowded Houses.										Percentage of Population Living in Overcrowded Houses.				
																		1 Apt		2 Apts.		3 Apts		4 Apts.		Total						
			1 Apartment.	2 Apartments.	3 Apartments.	3 Apartments.	Total.	1 Apartment	2 Apartments	3 Apartments	4 Apartments	Total			Adults.	Under 10 Years	Total.	Adults.	Under 10 Years	Adults.	Under 10 Years	Adults.	Under 10 Years	Adults.	Under 10 Years	Adults.	Under 10 Years	1 Apartment	2 Apartments	3 Apartments	4 Apartments	Total
1	Falkirk ...	6	7	7	2	—	16	2	1	—	—	3	19	£162 10 0	50	45	95	16	19	10	8	—	—	—	—	26	27	36.8	18.9	—	—	55.7
2	Grangemouth	8	28	26	1	—	55	1	—	—	—	1	56	£409 10 8	180	98	278	39	37	47	21	—	—	—	—	86	58	27.3	24.4	—	—	51.7
3	Muiravonside	15	89	83	4	1	177	23	7	—	—	30	207	£1498 1 2	549	227	776	155	110	87	31	—	—	—	—	242	141	34.1	15.2	—	—	49.3
4	Slamannan	6	24	6	1	1	32	5	5	—	—	10	42	£161 4 0	75	31	106	9	4	14	4	—	—	—	—	23	8	12.2	16.2	—	—	29.2
Totals ...		35	148	122	8	2	280	31	13	—	—	44	324	£2231 5 10	854	401	1255	219	170	158	64	—	—	—	—	377	234	30.8	17.6	—	—	48.6

" The thirty-five properties here reported on are all very old ones in a bad state of repair, all affected by dampness, without proper sanitary conveniences, etc., and generally in an insanitary and unhealthy condition. It is impossible at the present time to deal with the defects of each house in detail, and I am accordingly submitting only information as regards number of properties, number of houses, number of inmates, overcrowding, rentals, and employment of working population.

" (1) FALKIRK PARISH.—Six properties are under review in this Parish. These properties contain nineteen houses, of which nine are one-apartment houses, eight are two-apartment houses, and two are of three-apartments. Five of the one-apartment and two of the two-apartment houses are shown to be overcrowded. The total rentals of these properties is £162 10s. 0d. The total population is 95, consisting of 50 adults and 45 children under 10 years of age.

The figures reveal the fact that 36.8 per cent. of the population in the six properties are living in overcrowded one-apartment houses. 18.9 per cent. are living in overcrowded two-apartment houses, and that 55.7 per cent. of the population are living under overcrowded conditions.

" All the workers, twenty-five in number, are employed in the County Area within reasonable distance from their homes, and any houses that may be built to accommodate these workers would cause no inconvenience if erected in or near the village of Bonnybridge.

" (2.) GRANGEMOUTH PARISH.—Eight properties were surveyed in this Parish. The total number of houses under review is 56, consisting of 29 one-apartment houses, 26 two-apartment houses, and one three-apartment house. Of these houses 11 one-apartment and 8 two-apartment houses were found to be overcrowded. The total rentals of the properties is £409 10s. 8d. The total population of the listed properties is 278, of whom 180 are adults and 98 children under 10 years of age.

" Of the 278 inmates of these properties 144 or 51.7 per cent. are living under overcrowded conditions. Of that 144, 76 or 27.3 per cent. are living in overcrowded one-apartment houses, and 68 or 24.4 per cent. are living in overcrowded two-apartment houses.

" Nine persons are employed outwith the County, and the remainder so employed indicate that in building new houses, the building should be so grouped as to be convenient to the work centres.

" (3.) MUIRAVONSIDE PARISH.—Fifteen properties consisting of 207 houses are under review in this Parish. Of these 207 houses, 112 are one-apartment houses, 90 are two-apartment houses, 4 are three-apartment houses, and one is a four-apartment house.

Fifty-nine houses are shown to be overcrowded, of which 47 are one-apartment houses and twelve are two-apartment houses. The total population of these properties is 776, of whom 549 are adults and 227 are children under 10 years of age. The total rental of the fifteen properties is £1498 1s. 2d.

“Out of a population of 776, 383 persons or 49.3 per cent. are living under overcrowded conditions. Of this 383 persons, 265 or 34.1 per cent. are living in overcrowded one-apartment houses and 118 or 15.2 per cent. are living in overcrowded two-apartment houses.

“Forty-seven out of 224 workers are employed outwith the County and the remainder are so employed as to here again suggest the provision of new houses at a point convenient to all work centres.

“(4.) SLAMANNAN PARISH.—Six properties were surveyed in this Parish. The six properties consist of forty-two houses of which twenty-nine are one-apartment houses, eleven are two-apartment houses, one is of three-apartments, and one is of four apartments. Four houses are shown to be overcrowded, of which two are of one-apartment and two of two-apartments. The total population of these properties is 106, of whom 70 are adults, and 31 are children under 10 years of age. The total rental of the properties is £161 4s. 0d.

“Out of a population of 106, 13 persons or 12.2 per cent. are housed in overcrowded one-apartment houses, and 18 persons or 16.9 per cent. are housed in overcrowded two-apartment houses. Of the total population 31 or 29.2 per cent. are living under overcrowded conditions.

“Of forty working members of the population five are working outwith the County. Sixteen persons are unemployed, and their normal place of employment cannot be shown owing to the fact that work had definitely ceased in a number of pits in the district. Twelve persons travel a very considerable distance to their work and provision could probably be made for housing them nearer their place of employment.

“SUMMARY.—Table No. 1 summarises the main particulars for each Parish, and shows that thirty-five properties, consisting of 324 houses have been surveyed. Of these houses 179 are one-apartment ones, 135 are of two-apartments, 8 are of three-apartments, and two are of four-apartments. Thirty-one one-apartments and thirteen two-apartments are at present unoccupied. The total population shown to be living under unhealthy conditions is 1255, of whom 854 are adults and 401 are under 10 years of age. Eighty-nine houses, of which 65 are one-apartment houses and twenty-four are two-apartment houses are shown to be overcrowded. The total valuation of these properties is £2231 5s. 10d.

“Of a population of 12,556, 611 or 48.6 per cent. are living

under overcrowded conditions. Of that 611, 389 persons or 30.8 per cent. are living in overcrowded one-apartment houses and 222 or 17.6 per cent. are living in overcrowded two-apartment houses."

NORTHERN DIVISION SUMMARY OF PARISHES.

PARISH.	1 Apartment Houses.	2 Apartment Houses.	3 Apartment Houses.	4 Apartment Houses.	Total Number of Houses.	Population in 1 Apartment Houses.	Population in 2 Apartment Houses.	Population in 3 Apartment Houses.	Population in 4 Apartment Houses.	Number of Houses Occupied.	Number of Houses Unoccupied.	Inmates over 10 Years.	Inmates under 10 Years.	Houses Overcrowded.	Total Number of Workers.	Valuation of Properties
Falkirk ...	17	7	—	—	24	57	35	—	—	24	—	66	26	9	24	£126 2 0
Larbert ...	47	39	1	—	87	152	171	3	—	85	2	228	98	15	105	£464 15 0
Grangemouth	17	61	6	—	84	35	283	39	—	83	1	242	115	9	110	£297 14 0
Airth ...	11	13	2	3	29	18	55	13	11	27	2	68	29	—	24	£152 6 0
Totals ...	92	120	9	3	224	202	544	55	11	219	5	604	268	33	263	£1040 17 0

“(1) FALKIRK PARISH.—Three of the 24 houses are situated in Bonnybridge, one in Beaneross, and twenty in Laurieston. Seventeen are houses of one-apartment only, and the remaining seven are houses of two-apartments. The total rental of the houses classed as unfit for human habitation is £126 2s. 0d. From Table No. 2 it will be observed that 66 persons over 10 years and 26 under 10 years are accommodated in these twenty-four houses—a population of 92. It may be stated that 57 are houses in one-apartment dwellings, and 35 in houses of two-apartments. I find that nine of the dwelling-houses are overerowed. Table No. 3 indicates the various places of employment, and of a total of 24 workers, 14 are employed in Falkirk, Grangemouth, etc.

“(2) LARBERT PARISH.—Of 87 dwelling-houses in this Parish, which embraces Larbert, Stenhousemuir, Carron and Carronshore (the latter partly), 47 are houses of one-apartment only, 39 houses of two-apartments, and the remaining house consists of three apartments. The total rental of the houses classed as unfit for human habitation is £464 15s 0d. From Table No. 2 it will be observed that 228 persons over 10 years and 98 persons under 10 years are accommodated in these 87 houses—a population of 326. It may be further stated that 152 are houses in one-apartment dwellings, 171 in houses of two-apartments, and three in the three-apartment house. I find that 15 of the 87 houses are overerowed. Table No. 3 shows the various places of employment of the 105 workers.

“(3) GRANGEMOUTH PARISH.—Of 84 dwelling-houses in this Parish, embracing mainly houses in part of Carronshore and Skinflats, 17 are houses of one-apartment only, 61 houses of two-apartments, while six are houses of three-apartments. The total rental of the houses classed as unfit for human habitation is £297 14s. 0d. From Table No. 2 it will be observed that 242 persons over 10 years and 115 persons under 10 years are accommodated in these 84 dwelling-houses—a population of 357. It may be further stated that 35 are houses in one-apartment dwellings, 283 in houses of two-apartments, and 39 in the six houses each of three apartments. I find that 9 of the 84 dwelling-houses are overerowed. Table No. 3 shows the various places of employment of the 110 workers.

“(4) AIRTH PARISH.—Of 29 houses in the Village of Airth, 11 are houses of one-apartment, 13 houses of two-apartments, two houses of three-apartments, while the remaining three houses are of four-apartments. The total rental of the houses classed as unfit for human habitation is £152 6s. 0d. From Table No. 2 it will be observed that 60 persons over 10 years and 29 persons under 10 years are accommodated in these 29 dwelling-houses—a population of 97. It may be further stated that 18 are housed in one-apartment dwellings, 55 in two-apart-

ment dwellings, 13 in three-apartment dwellings, and 11 in four-apartment dwellings. I find no overcrowding of dwelling-houses in this particular case. Table No. 3 shows the various places of employment of the twenty-four workers.

“SUMMARY.—The summary requires no elaboration. 224 dwelling-houses have been classified as unfit for human habitation, viz. :—

92	dwellings	each	of	one	apartment.
120	“	“	“	“	two apartments.
9	“	“	“	“	three “
3	“	“	“	“	four “

The population are accommodated thus :—

In dwelling-houses of	one-apartment	... 262	persons.
“ “	“ two-apartments	... 544	“
“ “	“ three- “	... 55	“
“ “	“ four- “	... 11	“

Giving a total population of ... 872 “

“Of a total of 224 houses, 33 (practically 15 per cent.) are overcrowded. The standard adopted for over-crowding was that of the Royal Commission on Housing, three persons over 10 years being allowed per apartment, and two children under 10 years were reckoned as one adult. It should be noted that five of the dwelling-houses were unoccupied at the time of this inquiry, so that the total number of houses to be considered should accordingly be reduced to 219.

“The total valuation of the houses classified as unfit for human habitation over the four parishes is shown to be £1,040 17s. 0d.

“In the course of my investigation serious dampness in the walls of dwelling-houses, defective and damp floors, general disrepair, and the absence of proper domestic facilities were the main factors taken into consideration, and I very properly gave priority to the two first-mentioned defects.”

OUTSTANDING FIGURES OF THE TWO AREAS COMBINED

	Occupied	Empty	Total	Apartments.				No of	Valuation.
	Houses	Houses	Houses.	1	2	3	4	Occupants.	
Southern Area	280	44	324	179	135	8	2	1255	£2231 5 10
Northern Area	219	5	224	92	120	9	3	872	1040 17 0
Total ...	499	49	548	271	255	17	5	2127	£3272 2 10

The above table is easily followed. In the two areas the total houses scheduled number 548, of which 49 are at present unoccupied. It will be noticed that there are 271 one-apartment houses, or almost exactly a half of the total. In Mr Gough's area, however, the one-apartment houses are considerably more than a half, while in Mr. Macfarlane's area the one-apartment houses are considerably less.

The occupants of the houses scheduled number 2127, and the valuation of the houses is £3,272 2s 10d.

QUESTION OF SITES FOR NEW HOUSES.

"In the Southern Area it would be very unwise to replace these old unfit houses with new houses in the immediate vicinity as the pits associated with them have mostly been closed. The problem here is to set up new houses in vicinities convenient to existing industries in which the tenants would be likely to be absorbed. There is no use building houses where the people are not required.

"The problem is casier in the Northern Area, where the scheduled houses are situated in Lanrieston, Carronshore, Skinflats, Larbert, Stenhousemuir, and Airth. In the neighbourhood of all these places there are really live industries. Larbert and Stenhousemuir, however, might be grouped together, and any new houses built on a central site. I had thought, too, that Carronshore and Skinflats might be considered together, but a glance at the tables shows that a good many of the Skinflats occupants are employed in the neighbourhood of Grangemouth.

"On my tour of inspection I may say that I got the impression that the position in Skinflats was less urgent than in the other places visited. Not that the scheduled houses there could be said in themselves to be much better than the others, but the Skinflats housewives appeared to vie with each other in keeping bright, clean, tidy homes, and indeed they were making the most of their circumstances.

"The houses would need to be built over an extended period, and their number added to as the industries absorbed more and

more workers ; a corresponding number of old houses being closed.

“ In fixing sites for the erection of new houses other considerations would require to be taken into account, for example, existing water supplies, drainage facilities, lighting, scavenging, means of transport.

“ In the Southern Area the new houses in the first instance might be centralised in the Maddiston and Shieldhill districts. At Shieldhill there is as yet no proper drainage scheme, but, if a sufficient number of new houses were erected there the rateable value might be so increased as to render the provision of up-to-date drainage economically feasible. All the other public services are available, and thus much initial expense could be avoided.

“ From these two areas also roads radiate to the collieries at present providing employment, and a good bus service is available. The houses would probably also be fairly convenient to future mining or other developments.

“ Mr. Gough informs me that a large employer of labour has in view the erection of a considerable number of houses in the White Cross area, in connection with a contemplated extension of the fire-clay industry there. It might therefore be wise for the Local Authority to wait a little and see what the immediate future brings forth. The erection of these houses would, of course, be for his own employees.

“ Some of the houses scheduled in the White Cross district are exceptionally bad, and would require to be closed and replaced, but for various reasons it would probably be found that any new houses to be erected by the local Authority could most advantageously be built on a site adjacent to those provided by the employer.

“ Mr. Macfarlane suggests that in Airth with its relatively large number of ruinous and timeworn houses a reconstruction scheme might be considered. There is no doubt much to commend this if it were, after inquiry, found to be economically sound.

“ It would probably be judicious in the first instance to provide in new houses not more than a sixth to a quarter of the old houses scheduled. But local members from a more intimate knowledge of industrial possibilities, or rather probabilities, might be able to persuade the Local Authority to modify these proportions. In this connection it might be well to remember that it has been estimated that from 200,000 to 250,000 hands formerly employed in the mines of Great Britain are unfortunately likely to be permanently unemployed.

“ On my suggestion Mr. Macfarlane and Mr. Gough have each for his own area planned out on a six-inch ordnance survey map

the scheduled houses and have also indicated roughly possible sites for the new houses.

“The maps, which are meant to present a sort of bird’s-eye view of the whole scheme, will be on view when the report is being considered.

“The investigation and report have entailed much labour, especially on the Sanitary Inspectors, but it has been very educative to them and to me, and I trust that it will supply such light to the Councillors as will enable them to grapple successfully with what is admittedly a difficult problem.”

Housing of Seasonal Workers.—Only at one farm in the District were potato diggers housed during the season. The usual intimations were received from the farmer and the contractor and inspections were duly made. The diggers were found to be housed fairly comfortably and under good conditions.

WATER SUPPLY.

The water supply throughout the District was as a rule of excellent quality and sufficient for all purposes. Complaint was received, however, of lack of water at the higher levels at Standburn. The Water Board have the matter under consideration.

WATER ANALYSES.

Only two samples were taken for chemical examination, one from a dip well at Balquhatson Row, Slamannan, and the other from a dip well at Knowehead, Maddiston. The analysts’ figures will be found in table XVIII. The former was taken to ascertain its fitness to be used as a supply to a row of cottages. The sample was found free from contamination. The second sample was taken from a well supplying four cottages, and was found by the analysts to be polluted. As the cost of introducing gravitation water would have been very great considering the age of the houses and their dilapidated condition, the Committee agreed to include the houses in their “slum clearance” scheme, and until such time as other accommodation is found for the tenants, they were instructed to boil the water before use.

TABLE XVIII.—EASTERN DISTRICT. WATER ANALYSIS (IN GRAINS PER GALLON), 1928.

No.	Date of Report	Where Taken	Mineral Matter	Organic Matter	Total Solids	Nitrates	Free Ammonia	Albuminoid Ammonia	Total Ammonia	Temporary Hardness	Permanent Hardness	Total Hardness	Colour (Loch Katimbe Water=10)	Degree of Sewage Contamination
1	20/1/28	Dip Well, Balquhatsion Row, Slanmannan	18.20 15.83	.48 .64	18.68 16.47	46	.004 .001	.005 .005	.009 .006	14.81 6.79	1.48 4.73	16.29 11.52	faint 12	none 1 to 55
2	26/6/28	Dip Well, Knowelhead, Maddiston												

Note.—Messrs. Tatlock & Thomson's regular method of stating their opinion of a water as to sewage contamination is as follows:—"It may be regarded as being equal to a mixture of one part of average sewage with parts of pure water which had been filtered through earth till clear." The figures in the last column of the table give the result according to this method.

DRAINAGE.

The Special Districts are as mentioned in previous reports and have functioned satisfactorily.

The filters at Westquarter have proved insufficient and the Committee are now considering the question of extension. Extensions were made to sewers at Polmont Road and at Rumford to meet the needs of the new housing schemes. Under the supervision of Mr. Macfarlane and Mr. Gough, the Sanitary Inspectors of the District, a lot of work was carried out in the way of chaining and brushing sewers and in keeping the various drainage systems in good working order.

NUISANCES.

In the Northern Area, Mr. Macfarlane states that 241 nuisances were dealt with. One hundred and sixty-eight intimations were served and 19 verbal intimations given. No statutory notice was required.

In the southern part of the District Mr. Gough issued 258 intimations and various verbal intimations were given, the total number of nuisances coming to his knowledge being 344. No statutory notice was necessary.

Amongst the various types of nuisance dealt with may be mentioned :—

- Choked drains, water closets, and sinks.
- Defective water closet apparatus.
- Want of water closet accommodation.
- Ashpits overflowing or defective in construction.
- Damp walls of houses.
- Defective ceilings and roofs.
- Defective rhones and conductors.
- Defective lighting, and
- Defective water supply.

SLAUGHTER HOUSES AND OFFENSIVE TRADES.

The number of private slaughter-houses remains as before—namely, 12. In all, 311 inspections were made by the Sanitary Inspectors throughout the year and as a rule the premises were found to be kept in a cleanly state and well conducted. A warning was given in one case of breach of regulations with regard to the days and hours of slaughtering. In addition, ten notices were issued with regard to minor contraventions of the Byelaws.

Scottish Fish Oil and Guano Works.—Under the new management there is marked improvement in the conduct of the business as compared with former years. Owing to the extension of Falkirk Burgh boundaries, these works will now be under the supervision of the Town Council.

FOOD AND MEAT INSPECTION.

The number of inspections made for the discovery of unsound food was 463. The quality of meat sold in the District is generally of a good standard.

The County Veterinary Inspector condemned the carcases and internal organs of two bullocks and one cow on account of tuberculosis, and these were destroyed with the owner's consent.

DAIRIES.

So far the Dairy Byelaws for the Eastern District have not received the sanction of the Department of Health, but inspections have been made from time to time by the Sanitary Inspectors. One pleasing feature is the introduction of drinking bowls into an increasing number of byres.

Mr. McGregor, the County Veterinary Inspector, in his Annual Report states *inter alia* :—

“ In the District there are 199 Dairy Herds containing 2686 cows. As provisional registration has been granted to every applicant pending the adoption of Bye-laws, no attempt has been made to classify the various dairies. This number (199), includes all the dairies that will ultimately be registered, as well as those from which milk is only sold in small quantities.

“ Each herd was inspected at least once during the year when the udder of every cow was examined clinically for disease. In addition to this Statutory Inspection, further examinations were made as opportunity offered throughout the year, and in this way, 23 herds were examined twice, 12 three times, 2 four times, and one five times. In all, 256 inspections were made and 3196 cows examined.

“ One hundred and twenty-four cows were found with abnormal udders. Twelve of these exhibited symptoms that were suggestive of tuberculosis of the udder and a Bacteriological examination was carried out which proved positive for Tubercle Bacilli in four cases. During the period that the milk was under examination, the provisions of the Tuberculosis Order of 1925 were applied to the suspected cows and the milk from these animals was not permitted to be used for human consumption. The four cows found to be suffering from tuberculosis of the udder were immediately slaughtered under the above Order and Compensation, as laid down by the Order, paid to their owners.

“ Twenty-two cows were found suffering from Mastitis in one or more quarters of the udder. In no instance was the milk from the affected quarters being used for human consumption. Owners of affected animals were instructed in the proper disposal of infected milk and the steps to be taken for the prevention of the spreading of this condition to other cows.

“ Eighty-five cases of atrophy of the udder were noticed, probably the result of previous mastitis ; but as the affected quarters were functionless, there was no danger to the milk of the remaining quarters of the udder.

“ Induration of a non-tuberculous character was observed in five cows, probably the result of traumatism.

“ In addition to the four cases of tuberculosis of the udder mentioned above, fifteen cows were found suffering from Tuberculous Emaciation and thirteen which had a Chronic Cough with definite clinical signs of Tuberculosis. These animals were seized and slaughtered under the Tuberculosis Order of 1925, and the owners compensated.

“ Thorough disinfection was carried out after the removal of these cases of tuberculosis and the stalls, troughs, and standings made safe for the introduction of fresh cows to the byre.

“ During these visits of inspection throughout the year, and especially when a case of tuberculosis was found in the dairy herd, the attention of the owner was drawn to the various methods whereby tuberculosis can be eliminated from dairy herds, and the method best adapted for the individual herd was explained at length.

Milk (Special Designations) Order (Scotland) 1923.—“ One herd was licensed for the production of Grade A. Milk and the conditions laid down in the Order were complied with. This producer retails the milk of his herd in bottles in Falkirk, but does not receive any extra remuneration for the increased cost of production. There is apparently no demand in the District for Graded Milk, particularly milk from tubercle-free cows. and until consumers become educated to its value, and are prepared to pay the little extra cost, farmers will not incur the additional expense which the production of the higher grades of milk involves.

“ The general condition of the milk cows in the District was good. Concentrates, mostly of foreign origin, are fed during the winter to supplement foods grown on the farm, and during the summer months the cows are at grass. No instances were observed during the year of the fodder or diet adversely affecting the quality of the milk. While it is true that many farmers give extra foodstuffs to their heavier milking cows, little effort is made to balance the ration and profit by the knowledge now available as the result of recent research into animal dietetics. It is to be regretted that very few milk producers in the Eastern District keep accurate records of the product of their cows, as reliable information on this point is the basis of economical milk production.

“ The standard of cleanliness of the cows is good on the whole, but varies somewhat in the various byres, and, like the cleanliness of the milk produced in the District, is in great

measure governed by the personal interest of the farmer and his wife."

FACTORY AND WORKSHOP ACT.

The number of inspections made by the Sanitary Inspectors during the year, was 260, 28 of which were of factories and 232 of workshops. The defects found consisted of want of cleanliness, 4; insufficient sanitary accommodation, 3; unsuitable or defective sanitary accommodation, 6; and one other offence, making 14 defects in all. With the exception of one item all the defects were remedied, the number of notices served being 7.

INFECTIOUS DISEASE.

During the year 1928, the number of cases of infectious disease notified was 573, including 79 cases of chickenpox, which disease is notifiable for a limited period with a view to the possible detection of missed cases of smallpox. Exclusive of chickenpox the number of cases was 494, which is the largest number notified in one year for a considerable time, the numbers for the past ten years being :—

1918	...	...	179	1923	...	...	237
1919	...	...	259	1924	...	...	298
1920	...	...	440	1925	...	...	471
1921	...	...	385	1926	...	...	448
1922	...	...	254	1927	...	...	489

giving an average notification figure of 346 per annum.

In Tables XIX and XX figures are given showing the various diseases notified, their distribution over the parishes, and the age grouping of those attacked.

Smallpox.—On the forenoon of the 30th June, Dr. Lawrie of Polmont 'phoned me regarding a suspicious case, the patient being a boy, aged 16 years, an inmate of the Borstal Institution, Polmont. I arranged to see the case on the afternoon of the same day.

With Dr. Lawrie and my assistant, Dr. Rutherford, I examined the boy very carefully. The boy had arrived from Brechin on the 7th June and had first become unwell on the morning of Thursday, the 21st. He had severe headaches and was inclined to be sick so that he could not eat his breakfast. He was at once sent to bed and isolated when his temperature was found to be 102°F. at 10 a.m. The severe headache continued, the temperature meanwhile rising until on the 23rd it reached 104.8°F., after which it fell somewhat suddenly, but not to the normal. On the morning of the 25th spots were noticed, first on his brow and scalp. The eruption gradually spread downwards, mainly affecting the upper and lower limbs, the trunk

being little affected. The papular eruption tended to become vesicular and later pustular.

When I first saw the boy on Saturday, the 30th, there were pustules also on the palms and soles. The chart showed that the boy's temperature had risen very slightly on the appearance of the eruption but had gradually declined, and when I saw the boy on the 30th the temperature was normal. The eruption was mostly pustular, while on the scalp the pustules were showing signs of drying. They appeared to be multilocular and a fairly large percentage showed signs of umbilication. The boy, however, could not be said to be feeling ill, but remembering the type of smallpox which had occurred in Dundee in the late epidemic, and especially that it had varied from the usual recognised type, I thought it well to ask Dr. Dittmar of the Board of Health to see the case. The boy, I may say, had not been vaccinated. The same evening Dr. Dittmar and I saw the boy, when Dr. Dittmar said that he had no doubt whatever that it was a case of smallpox, and resembling the type that had occurred in Dundee.

On the Saturday evening I communicated with Dr. Sinclair, County Medical Officer of Forfarshire, informing him of the case. I learned from Dr. Sinclair that "chickenpox" had been fairly prevalent in Brechin and that he had been called in to examine several doubtful cases. He said, however, that he would at once make inquiry at the patient's house.

Dr. Dittmar further urged that the Local Authority should have the case isolated without delay in view of the fact that there were 207 inmates in the Institution in addition to the staff, many of whom were married with families, and all of whom were to be regarded as contacts. My difficulty, however, was that the Smallpox Hospital belongs to a Joint Board composed of the three District Committees of the County together with the burghs of Falkirk, Denny and Kilsyth. Further the Eastern District Committee had already resolved that they could not treat in their Hospital cases of ordinary acute infectious disease arising among inmates of the Borstal Institution, the reason being that the parents of children in the District would object. In this case, however, that objection could not be lodged, because the Smallpox Hospital was closed and there were no other children from the Combining Area. I said also that the question of expense for dealing with the case arose but both Dr. Dittmar, as representing the Board of Health, and Dr. Devon, as representing the Prison Commissioners, undertook to get the bodies they represented to approach the Treasury with a view to paying for the opening and staffing of the Hospital and expense in connection with the treatment of the case or any further cases that might arise in the Borstal Institution.

After consultation with the Clerk to the Joint Hospital Board, I undertook to make arrangements for the removal of the case and its treatment at Taylorton Smallpox Hospital on the strength of what Drs. Dittmar and Devon had said and also on the understanding that it would in no way form a precedent.

On Saturday evening I approached Dr. Prangnell of Falkirk with regard to the staff for the Smallpox Hospital, and he at once said that he would do everything he could. He accordingly supplied me with two efficient nurses and a maid.

On Sunday morning Miss Clark, Matron of Bannockburn Hospital, together with two others went to the Hospital and had it opened, aired, cleaned and put in thorough order for the reception of the patient and the nursing staff.

There was difficulty about the gravitation water supply, but Mr. Goudie with Mr. Henderson, the plumber, managed to get a barrel of water from the town until the pipes could be seen to.

Everybody who could was willing to help, with the result that the patient was admitted on Sunday evening.

At the Borstal Institution itself Mr. Black undertook to arrange to have preventive measures carried out to the very fullest extent. Mr. Gough, my sanitary inspector for the area, carried out a most thorough disinfection of the quarters concerned, and my assistant, Dr. Rutherford, spent two days assisting Dr. Lawrie, the visiting Physician, in carrying out vaccination and re-vaccination.

Everything was done to prevent, as far as possible, the spread of the disease.

Fortunately, no other case occurred, and the patient was duly discharged from Hospital on the 3rd of August.

Scarlet Fever.—The number of cases notified was only 113 as compared with 180 in 1927, and 269 in 1926. The disease was distributed in the parishes as follows:—Falkirk, 38; Larbert, 34; Grangemouth, 20; Muiravonside, 17; and Slamannan, 4. Over 93 per cent. of the cases were removed to Hospital. One case out of 113 proved fatal.

Enteric Fever.—Only two notifications were received, one from Falkirk parish and the other from the parish of Muiravonside. Both were removed to Hospital and both recovered.

Diphtheria.—In all, 230 cases were notified, as compared with 147 in 1927, 81 in 1926, 117 in 1925, and 83 in 1924. The greatest number of notifications was from the parishes of Falkirk and Larbert. The prevalence of the disease reached its height in the late autumn, and at the October meeting of the District Committee I reported verbally to the following effect:—

“ Referring to the statement of cases of infectious disease notified during the month, it will be observed that there have been quite a number of cases of diphtheria in the parishes of Larbert and Falkirk. The epidemic originated in the Burgh of Falkirk, where there were many cases. In the County area the disease seems principally to have struck Laurieston and Thornbridge, although it had spread pretty well over the Eastern District and certain portions of the Central District also. The reason I am pointing out these facts is that there have, unfortunately, been three deaths in Laurieston in connection with the outbreak.

“ Diphtheria used to be an extremely fatal disease, and it was common to get a death out of every four attacked, or 25 per cent. With modern methods of treatment, however, that has been reduced and we are rather surprised now when deaths average 10 or 11 per cent. at the most. But that pre-supposes that there is going to be early treatment. The diphtheria bacilli, or germs, are located in the throat of patients. They do not themselves invade the blood stream but they manufacture toxins in their locus and the toxins are absorbed from the membrane in the throat. These toxins are the real danger—they are poisonous. The new treatment consists in injecting into the tissues of the patients anti-toxins which neutralise the effect of the toxins. It has been proven over and over again that the earlier the antitoxin is given the better. The toxins perform their deadly work on the nervous system and the earlier the anti-toxins are into the blood stream the less time do the toxins have to poison the nervous system. The point is that, of the children who had died, one had been ill for four days, and two had been ill for six days before the doctor was called in. Another had been ill for three days before the doctor was called. I do not wish to throw any blame on the parents. I would hesitate to do that, but diphtheria in its worst types very often appears to be a mild disease so far as the throat is concerned. The people are not alarmed. The ordinary quinsy or suppurating throat often causes the child far more discomfort than an attack of diphtheria, but it is not anything like so deadly. I wish to emphasise that in an epidemic time like the present, parents should be particularly careful to watch for any divergence from health and especially for the slightest complaint about sore throat, and have the doctor called at once. Unless that is done, it does not give the family doctor a chance; it does not give the hospital a chance, and, worst of all, it does not give the patient a chance. On the part of the sanitary staff there is never a moment lost. They feel their responsibility so much that with the motor ambulance they can be at the house within a quarter of an hour or twenty minutes from the time they

get notification of the case, and the case can be in the hospital within about half an hour."

The foregoing verbal statement was given wide publicity in the local newspapers, with the result that parents and guardians were very much on the qui vive, and it is a striking fact that no further deaths occurred, although the epidemic continued for months thereafter.

Of the 230 cases, 227 were isolated in hospital without delay, only three having been treated at home. Four deaths occurred, giving the low fatality rate of 1.7 per cent.

Tuberculosis.—The number of cases notified was 83, of which 32 were of pulmonary tuberculosis and 51 of non-pulmonary. Details with regard to the treatment of this disease are given in an earlier part of the report.

Non-Notifiable Infectious Diseases.—On receipt of information from Headmasters of Schools or from other sources, inquiry is made by the Sanitary Inspectors and the parents are advised as to precautions to be taken. The number of cases coming to my knowledge during the year was :—Measles, 31 ; Whooping-Cough, 8.

School Closure on Account of Infectious Disease.—On no occasion was resort to school closure found necessary.

TABLE XIX.—EASTERN DISTRICT.—CASES OF INFECTIOUS DISEASE COMING TO THE KNOWLEDGE OF THE
MEDICAL OFFICER OF HEALTH DURING THE YEAR 1928.

Parish	Smallpox	Diphtheria and Membranous Croup	Erysipelas	Scarlet Fever	Typhus Fever	Enteric Fever	Continued Fever	Puerperal Fever	Cerebro-Spinal Fever	Ophthalmia Neonatorum	Chickenpox	Infantile Paralysis	Dysentery	Malaria	Infective Jaundice	Encephalitis Lethargica	Acute Primary Pneumonia	Acute Influenza Pneumonia	Tuberculosis		Total
																			Pulmonary	Non-Pulmonary	
Alrth	...	13	...	...	...	...	...	...	...	...	2	...	...	...	...	...	1	...	3	6	25
Falkirk	...	101	...	...	...	...	...	...	...	...	45	...	...	...	...	...	19	3	14	22	250
Grangemouth ...	1	33	2	20	...	...	...	...	...	...	8	...	...	...	...	...	1	3	4	4	78
Larbert	...	53	3	34	...	...	...	...	...	12	2	...	...	...	...	...	3	...	2	10	111
Mulravonskie ...	...	24	3	17	...	1	...	1	...	...	18	...	...	...	...	1	1	3	5	5	78
Slamannan	...	6	...	4	...	...	...	1	...	...	4	...	...	...	...	...	2	5	4	4	31
Totals	1	230	15	113	...	2	...	2	...	4	79	...	12	...	...	1	27	14	32	51	573
Removed to Hos- pital, etc. ...	1	227	4	106	...	2	...	1	...	1	...	...	12	...	...	...	2	1	12	17	370

TABLE XX.—EASTERN DISTRICT.

RETURN OF CASES OF INFECTIOUS DISEASE NOTIFIED, &c., DURING THE YEAR ENDING
31ST DECEMBER, 1928.

DISEASE	NUMBER OF CASES COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH									
	At all Ages	At Age—Years							Cases re- moved to Hos- pital	Cases not re- moved to Hos- pital
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and up- wards		

A.—Diseases specified in the Infectious Disease (Notification) Act, 1889

Shol or Enteric Fever	2	...	...	...	...	*1	1	...	2	...
Shus Fever	...	...	...	...	...	...	...	...	...	...
Shpox	1	...	...	...	1	...	...	...	1	...
Shiet Fever or Scarlatina	113	...	22	78	7	6	...	...	106	7
Shtheria and Membrau-										
Shus Croup	230	...	38	150	24	18	...	...	227	3
Shpelas	15	...	...	...	1	6	5	3	4	11
Shperal Fever	2	...	...	...	1	1	...	...	1	1
Shera	...	...	...	...	...	...	...	...	...	...
Shpsing Fever	...	...	...	...	...	...	...	...	...	...
Shstained Fever	...	...	...	...	...	...	...	...	...	...

*B.—Diseases notifiable in terms of Regulations made under Section 78 of the Public Health
(Scotland) Act, 1897*

Shthalmia Neonatorum	4	4	...	...	...	...	...	...	1	3
Shkenpox	79	4	20	55	...	...	...	...	...	79
Shctive Jaundice	...	...	...	...	...	...	...	...	...	...
Sharia	...	...	...	...	...	...	...	...	...	...
Shntery	2	...	...	...	1	1	...	...	2	...
Shntile Paralysis	...	...	...	...	...	...	...	...	...	...
Shb-Encephallitis	...	...	...	...	...	...	...	...	...	...
Shpballitis Lethargica	1	...	1	...	...	...	...	...	...	1
Shpe Primary Pneumonia	27	2	7	7	6	3	2	...	2	25
Sh Influenzal Pnenmonia	14	1	2	1	2	6	2	...	1	13
Shmonary Tubercnlosis	32	...	1	5	8	12	6	...	12	20
ShPulmonary Tuber- glosis	51	1	13	23	7	6	1	...	17	34
Total of A. and B.	573	12	104	319	58	60	17	3	376	197

One of these cases was subsequently diagnosed as Paratyphoid B. and was removed to Hospital.

Name of Hospital or Hospitals in which Cases were Treated.

Camelon Fever Hospital, Falkirk.

Ochil Hills Sanatorium, Milnathort.

Cases notified in a previous year
and removed to Hospital for the
first time during 1928.

PUBLIC HEALTH HOSPITAL, CAMELON.

ANNUAL REPORT FOR YEAR, 1928.

The number of cases admitted to Camelon Hospital during the year 1928 was 359, being six more than in the preceding year. At the end of 1927, there were in the Wards 35 cases, and at the end of 1928 there were 36 cases, so that the number treated to a termination was 358.

The total length of residence of the 359 cases until the end of the year was 10,471 days. The length of residence of the 35 cases remaining at the end of 1927 was 1503 days. The daily average number of patients in the Wards during the year was 29.

The number of Scarlet Fever patients treated was 111. The total length of residence was 4,658 days, giving an average of 41.9 days. Two cases of Scarlet Fever and Chickenpox were treated. The total residence was 69 days, giving an average of 34.5 days. The number of Diphtheria patients treated was 221. The total residence of these was 4,273 days, giving an average of 19.3 days. Four cases died. Two cases only lived 11 and 12 hours respectively after admission.

One case of Scarlet Fever and Diphtheria was treated for 38 days.

One case of Enteric Fever was treated for 31 days.

One case of Para-Typhoid was treated for 24 days.

Three cases of Erysipelas were treated. The length of residence was 46 days, an average of 15.3 days.

One Puerperal Fever case was treated for 13 days.

Two cases of Dysentery were treated. The length of residence was 35 days, an average of 17.5 days.

Three cases of Pneumonia were treated. The length of residence was 55 days, an average of 18.3 days.

The number of Tuberculosis cases treated was 13. The total length of residence was 1,229 days, giving an average of 94.5 days. One case died.

TABLE XXI.—ADMISSIONS TO CAMELON HOSPITAL, 1928.

AGE IN YEARS	0-5		5-10		10-20		20-30		30-40		40-50		Over 50		Totals		
Disease	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Both
Scarlet Fever ... Recovered ...	11	11	20	27	5	10	...	1	1	4	...	...	...	...	37	53	90
... Remaining ...	...	1	7	5	6	2	...	...	...	...	...	...	...	...	13	8	21
Diphtheria ... Recovered ...	19	12	38	60	24	26	4	12	1	6	...	...	...	...	86	116	202
... Died ...	1	1	...	...	1	1	...	...	...	...	...	...	...	...	2	2	4
... Remaining ...	2	...	3	2	3	3	1	1	...	...	...	...	...	...	9	6	15
Pneumonia ... Recovered ...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	3	...	3
Erysipelas ... Recovered ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	3
Scarlet Fever and Chickenpox Recovered ...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1	1	2
Scarlet Fever and Diphtheria ... Recovered ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1
Enteric Fever ... Recovered ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
Para-Typhoid ... Recovered ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
Dysentery ... Recovered ...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	2	...	2
Puerperal Fever Recovered ...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
Tuberculous ... Discharged ...	...	...	1	1	3	3	...	2	...	1	...	...	1	...	5	7	12
... Died ...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	1
Totals	33	26	71	95	42	45	8	18	2	13	2	1	2	1	160	199	359

Ultra Violet Ray Treatment.—The number of Patients treated for the year was 72. At the end of the year 39 patients were still under treatment.

The following is a summary of the cases treated.

Pulmonary Tuberculosis, ...	1
Tuberculosis of Abdomen, ...	15
Tubercular Glands, ...	37
Lupus (Tuberculosis of Skin), ...	9
Tubercular Abscesses, ...	4
Tuberculosis of Spine	1
Tuberculosis of Eye,... ..	2
Tubercular Joints, ...	2
Rickets, ...	1
	72

The patients mostly benefited by the treatment, and in a number of cases the improvement was so great that the treatment was discontinued. A number of patients of their own accord failed to continue treatment. The patients remaining at the end of the year were all showing improvement.

VITAL STATISTICS.

Population.—The population of the Eastern District, as estimated by the Registrar General, was 39,916, which indicates an apparent decrease of 1856 persons since the Census was taken in 1921. This figure, which is calculated by means of a fixed formula, is without doubt under estimated as in all probability there has been an increase in population.

Births and Birth-Rates.—The number of births registered was 879. After correction for transfers, however, the net number was 905, giving a birth-rate of 22.7 per 1000 of population which is exactly the same as that for the previous year. For the five years before that, the rates were :—1922, 23.9 ; 1923, 23.5 ; 1924, 23.9 ; 1925, 22.7 ; and 1926, 23.1, giving an average annual rate of 23.4.

Deaths and Death-Rates.—After correction for Transfers, the deaths numbered 465, which is equal to a death-rate of 11.6 per 1000 of population, as compared with 11.4 for the previous year. The rates for the five years 1922 to 1926 were respectively :—11.1, 10.3, 12.4, 12.2 and 10.6. These give an annual average of 11.3 per 1000.

From Tuberculosis the death-rate was 0.83, the death-rate from pulmonary tuberculosis being 0.53.

The " Principal Epidemic Diseases " accounted for 17 deaths, one being from scarlet fever, five from whooping cough, four

Principal Rates per 1000 of Estimated Population.

	Numbers Registered In District	Transfers		Corrected Number		Uncorrected	Corrected for Transfers	Corrected for Transfer and adjusted for Age and Sex Distribution
		Out	In	Both Sexes	Females			
Total Births (including Illegitimate Births)	879	22	48	905	493	22.0	22.7	.....
Illegitimate Births	47	3	17	61	36	6.6	6.7	.....
Marriages	265	...	...	...	...	12.3	11.6	12.8
Deaths	489	106	82	465	247	.....	0.83	.....
						.....	0.53	.....
						.....	0.43	.....
						.....	77	.....

Birth-rate
 Illegitimate Birth-rate per 100
 Total Births
 Marriage-rate
 Death-rate.—All Causes
 " All Tuberculosis
 " Tuberculosis of Respiratory System
 " Principal Epidemic Diseases (asterisked below)
 Infantile Mortality Rate (Deaths under One Year per 1000 Births)

CAUSES OF DEATH (corrected for Transfers).

CAUSES OF DEATH	ALL AGES			AGE											
	Both Sexes	Males	Females	—1	1—	5—	10—	15—	25—	35—	45—	55—	65—	75—	85 and over
*Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Scarlet Fever	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...
*Whooping-Cough	5	1	4	3	2	...	...	...	...	...	...	...	...	...	...
*Diphtheria	4	2	2	...	2	...	1	1	...	...	1	...	...	...	...
Influenza	7	4	3	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis Lethargica	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	3	2	1	1	1	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Respiratory System	21	10	11	...	1	...	...	2	7	7	2	...	1	...	...
Tuberculous Meningitis	3	3	...	1	2	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Intestines and Peritoneum	5	3	2	...	2	...	1	1	...	...	1	...	...	...	...
Other Tuberculous Disease	4	2	2	...	...	...	1	...	...	...	...	...	...	...	...
Malignant Tumours	41	22	19	...	...	...	1	...	1	1	...	...	...	...	...
Rheumatic Fever	3	1	2	...	...	...	...	...	5	...	12	10	10	4	...
Meningitis (not Cerebro-Spinal or Tuberculous)	4	1	3	1	1	2	...	...	...	...	1	1	...	...	...
Apoplexy	42	16	26	...	...	...	...	...	...	1	...	...	...	...	...
Heart Disease	55	31	24	...	1	...	1	4	3	...	4	11	18	12	1
Diseases of Arteries	9	5	4	...	...	...	...	...	...	...	...	1	2	4	2
Bronchitis... ..	21	17	4	1	1	...	...	...	...	...	...	1	8	7	3
Pneumonia (all forms)	57	31	26	16	6	...	1	2	7	3	5	7	3	6	1
Other Diseases of Respiratory System	7	4	3	1	...	...	...	1	...	...	2	...	1	2	...
*Diarrhea and Enteritis (under 2 years)	7	2	5	6	1	...	...	...	...	...	...	...	...	...	...
Appendicitis	4	2	2	...	1	1	1	1	...	...	...	...	...	...	...
All Diseases of Liver (not Malignant)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nephritis, Acute and Chronic	9	3	6	...	...	1	...	...	...	...	3	2	2	...	1
Puerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy and Parturition	4	...	4	...	...	...	...	2	2	...	...	...	...	...	...
Diseases of Early Infancy and Malformations	36	22	14	34	2	...	...	...	...	...	...	...	...	...	...
Suicide	3	1	2	...	...	...	...	1	...	1	...	...	...	...	...
Other Violent Deaths	28	18	10	1	...	...	1	8	2	2	5	4	1	2	2
Other Defined Diseases	78	42	36	5	2	1	1	1	4	9	7	7	14	19	8
Causes Ill-defined or Unknown	3	1	2	...	...	...	...	...	...	...	...	1	2	...	...
All Causes	465	247	218	70	26	5	8	26	28	30	48	61	75	72	16

from diphtheria and seven from diarrhoea and enteritis (under 2 years). This group of causes gave a death-rate of 0·43 per 1000.

The Infantile Mortality Rate (*i.e.* the number of deaths under one year of age per 1000 births) was 77.

Table XXII gives the figures for Births, Marriages, and Deaths, together with a note of the causes of death.

WESTERN DISTRICT.

HOUSING.

New Buildings.—The number of plans submitted to, and passed by, the District Committee was 35, being 12 more than in the previous year. These included plans for 17 new dwelling houses, one pavilion, 13 for alterations and additions to existing buildings, and for various other buildings not for human habitation. Of the 17 new dwellings, five were of three apartments, 4 of four apartments, and 8 of more than four apartments. One of the three-apartment houses, however, was in the nature of a temporary hut.

One of the plans for “alterations and additions” was for the conversion of Lennox Castle into a temporary Mental Deficiency Hospital, which, when completed, will contain some 70 apartments and offices.

Local Authority's Scheme.—Under the Committee's Housing Schemes, the 46 houses sanctioned in the previous year were completed. These are situated—28 at Lennox-town, 12 at Strathblane, and 6 at Campsie Glen. During 1928 6 houses were sanctioned for Milton of Campsie, and will be completed in 1929.

Housing Acts.—Report for the year ended 31st December, 1928, on proceedings taken as regards the Inspection, Improvement, and Closure of Dwelling-Houses :—

A.—HOUSING (INSPECTION OF DISTRICT) REGULATIONS (SCOTLAND), 1928.

1. Number of dwelling-houses inspected	...	...	183
2. Number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation	...	...	19
3. Number of representations made to the Local Authority with a view to the making of closing orders	...	...	19
4. Number of dwelling-houses in respect of which closing orders were made	...	...	19
5. Number of dwelling-houses the defects in which were remedied without either the making of closing orders or the service of notices under Section 3 (1) of the Housing (Scotland) Act, 1925	...	...	—
6. Number of dwelling-houses which after the making of closing orders were put into a fit state for human habitation	...	...	—

B.—HOUSING (SCOTLAND) ACT, 1925.

1. Number of dwelling-houses in respect of which notices were served under Section 3 (1) ...	0
2. Number of dwelling-houses rendered fit for human habitation under Section 3 (1) ...	—
3. Number of dwelling-houses in respect of which closing orders were deemed to have become operative under Section 3 (1) ...	—
4. Number of dwelling-houses rendered fit for human habitation by the Local Authority under Section 3 (2) ...	—
5. Number of cases where intimations were given under Section 20 (1) as to insufficient water-closet accommodation :—	
(a) Cases where requirement complied with by owners ...	7
(b) Cases where works carried out by Local Authority after failure of owners to do so ...	—
(c) Cases still pending ...	77
6. Number of houses of (a) one apartment and (b) two apartments for the erection of which the consent of the Local Authority has been given in terms of Section III. ...	—

C.—HOUSING, TOWN PLANNING, ETC., (SCOTLAND) ACT, 1919

1. Number of cases where notices were served under Section 40 (1) to provide dwelling-houses with water supply :—	
(a) Cases where requirements complied with by owners ...	—
(b) Cases where works carried out by Local Authority after failure of owners to do so ...	—
(c) Cases still pending ...	—

Housing of Seasonal Workers.—Potato-digging was carried on at 22 farms, covering a total area of about 137 acres. The number of diggers employed was 213, of whom 97 were men and 116 women. Mr. Gough, Sanitary Inspector, made in all 82 inspections. Accommodation was provided for the diggers at 16 of the 22 farms, the other six farms being worked from centres.

Sufficiency and Habitability of Existing Dwelling-Houses.—In my last Annual Report it was stated that by the end of the year 1927 the number of completed houses provided by the Local Authority under their Housing Schemes was 84.

and that the number of houses erected by private enterprise since the war was 55—a total of 139 houses. During 1928, as already stated, other 46 houses were completed by the Local Authority and 17 by private enterprise, bringing the total of completed houses up to 202. My estimate, made in 1919, of the number of new houses required to replace existing houses which could not reasonably be made fit for human habitation, and also to relieve overcrowding, amounted to 290 houses, but as I have mentioned in previous reports, the Western District differs from the other two Districts in that it is much more agricultural and pastoral than industrial, and that most of the local industries have declined.

FACTORIES AND WORKSHOPS.

The number of workshops on the register at the end of the year was 64, and these are reported by the Sanitary Inspector to be on the whole well conducted.

WATER SUPPLY.

Milton of Campsie Water District.—It has now been decided to proceed with the construction of filters, and the work is in progress.

Killearn Special District.—Owing to the number of new houses erected in the district, it has been found necessary to provide additional storage accommodation.

Otherwise, the water supplies of the District have been of good quality, and sufficient in quantity.

TABLE XVIII.—WESTERN DISTRICT.—WATER ANALYSES (IN GRAINS PER GALLON), 1928.

No.	Date of Report	Where Taken	Mineral Matter	Organic Matter	Total Solids	Nitrates	Free Ammonia	Albuminoid Ammonia	Total Ammonia	Temporary Hardness	Permanent Hardness	Total Hardness	Colour (Loch Katrine Water=10)	Degree of Sewage Contamination
1	8/5/28	Milton Reservoir, Parish of Campsie	5.20	.60	5.80	...	tr.	.005	.005	2.94	1.25	4.19	12	...
2	8/5/28	Bath Tap, Walbry House, Milton (same source as No. 1)	3.16	.58	3.74	...	tr.	.005	.005	2.97	1.20	4.17	11	...
3	8/5/28	Tap in Co-operative Store, Milton	5.10	.62	5.72	...	tr.	.004	.004	2.82	1.36	4.18	13	...
4	30/5/28	From 12" pipe, at Bungalow, Carbeth (Guthrie, Strathblane	6.97	2.04	9.01	.05	.002	.000	.011	2.94	1.82	4.76	10	...
5	30/5/28	From small stream running past the Bungalow, "	6.78	2.50	9.28	.30	.015	.007	.022	2.52	2.21	4.73	60	1 to 75
6	15/8/28	Dip Well at Fellowship Camp, Carbeth, Blanchfield	4.72	.30	5.02	...	.002	.005	.007	2.73	.32	3.05	10	...
7	15/9/28	Supposed spring on Hill above Crosshouse, Campsie Glen	5.72	.30	6.02	...	...	.005	.005	3.35	.70	4.05	5	...

Note.—Messrs. Tatlock & Thomson's regular method of stating their opinion of a water as to sewage contamination is as follows:—"It may be regarded as being equal to a mixture of one part of average sewage with . . . parts of pure water which had been filtered through earth till clear." The figures in the last column of the table give the result according to this method.

WATER ANALYSES.

The number of samples taken for analysis was seven, and the analysts' figures will be found in Table XXIII.

Samples numbered 1, 2, and 3 in the table were taken as a result of complaint regarding suspended matter, and I investigated the complaint along with a representative of the Board of Health. The first sample was from Milton Reservoir, and the Analyst reported that it contained a small quantity of suspended matter. No. 2 was from the bath tap in Waltry House, which is near the terminus of the last section of the main, and No. 3 was drawn at a point 450 yards from Waltry House to ascertain the condition of the water in the centre of the village. In both of these samples a small quantity of suspended matter was found. Otherwise, all three samples were excellent. The matter was duly reported to the District Committee, and after full consideration it was decided to provide filters, as already stated.

Samples 4 and 5 were taken at the Bungalow, Carbeth, in order to ascertain the fitness of the water for domestic use, and for the use of campers in the neighbourhood. One of the samples (No. 5) was found to be contaminated. A gravitation supply from the Clydebank Water Main has now been provided.

The analysis of No. 6 was well reported on, and the water is now in use at the Fellowship Camp, Carbeth.

Sample No. 7, from a spring to supply a new house at Crosshouse, Campsie Glen, was reported as suitable for domestic purposes, and is now in use.

DRAINAGE.

The three Special Districts of Balfron, Drymen, and Lennoxtown have continued to function in an efficient manner during the year.

Towards the end of the year, as a result of a report by Mr. Gough, the District Committee asked a firm of civil engineers to prepare a drainage scheme for the village of Milton of Campsie.

DAIRIES.

The number of dairies on the register at the end of the year was 177, the actual number of dairy herds being 154, and the number of cows 3261.

In his Annual Report the Veterinary Inspector, Mr. McGregor, states :—

" Each herd was inspected at least once during the year, when the udder of every cow was examined clinically for disease. In addition to this statutory inspection, further examinations were made as opportunity offered throughout the year, and in this way 24 herds were examined twice, 10 three times, 3 four times, 1 five times, and 1 six times. In all, 216 inspections and 5115 examinations were made.

" Two hundred and fourteen cows were found with abnormal udders. Sixteen of these exhibited symptoms that were suggestive of tuberculosis of the udder, and a bacteriological examination of the milk from these cows was carried out, which proved positive for tubercle bacilli in four cases.

" During the period that the milk was under examination the provisions of the Tuberculosis Order of 1925 were applied to the suspected cows, and the milk of these animals was not permitted to be used for human consumption. The four cows found to be suffering from tuberculosis of the udder were immediately slaughtered under the above-mentioned Order, and compensation, as laid down by the Order, paid to their owners.

" Twenty-seven cows were found suffering from mastitis in one or more quarters of the udder. In no instance was the milk from the affected quarters being used for human consumption. Owners of affected animals were instructed in the proper disposal of infected milk and the steps to be taken for the prevention of the spreading of this condition to other cows.

" One hundred and forty-seven cases of atrophy of the udder were observed, probably the result of previous mastitis ; but as the affected quarters were functionless there was no danger to the remaining quarters of the udder.

" Induration of a non-tuberculous character was noticed in fourteen udders, probably the result of traumatism.

" In addition to the four cases of tuberculosis of the udder mentioned above, seventeen cows were found suffering from tuberculous emaciation and eight with chronic cough and definite clinical signs of tuberculosis. These animals were seized and slaughtered under the Tuberculosis Order of 1925, and the owners compensated.

" Thorough disinfection was carried out after the removal of these cases of tuberculosis, and the stalls, troughs, and standings made safe for the introduction of fresh cows to the byre.

" During these visits of inspection throughout the year, and especially when a case of tuberculosis was found in the dairy herd, the attention of the owner was drawn to the various methods whereby tuberculosis can be eliminated from dairy herds, and the most suitable method for the individual herd was explained at length. In the Western District of the

County there are many farms on which heifer calves are reared, and the method first introduced by Professor Bang of Copenhagen, to eliminate tuberculosis, is being carried out in several of these herds. During 1928, at least 600 cows in the District were subjected to the tuberculin test by private veterinary surgeons employed by the owners and the plan of tuberculosis eradication mentioned in last year's report continues to be followed.

"MILK (SPECIAL DESIGNATIONS) ORDER (SCOTLAND), 1923."

"CERTIFIED MILK.—One licence for the production of this grade of milk was issued for the year under review. In a previous report (1927) the method by which this tubercle-free herd was established was explained at length, and it is satisfactory to report that the re-test showed that it continued to maintain its tubercle-free character.

"GRADE A (T.T.).—Two licences for this grade were issued during the year. No reactors were found when these herds were subjected to the tuberculin test. The demand for milk from tubercle-free herds, however, is not increasing, and the milk from these herds is not bringing in any additional revenue to their owners at present. The surplus stock from these herds commands a better price, and is in demand by owners of tubercle-free herds in adjacent counties.

"GRADE A.—Licences for the production of this Grade of milk were issued to six producers in the District, and the conditions laid down by the Order were complied with. This milk is taken to Glasgow, and there pasteurised by a large milk distributing firm which gives an increased price to the producers for their supplies.

"The general condition of the cows in the District was good. Concentrates, mostly of foreign origin, are fed during the winter to supplement the foods grown on the farm, and during the summer months the cows are at grass.

"No instance was observed during the year of the fodder or diet adversely affecting the quality of the milk. While it is true that many farmers give extra foodstuffs to their heavier milking cows, few make an effort to balance the ration and profit by the knowledge now available as the result of recent research into animal dietetics. It is to be regretted that very few farmers in the Western District keep accurate records of the product of their cows, as reliable information on this point is the basis of economical milk production.

"The standard of cleanliness of the cows is good on the whole; but varies somewhat in the various byres, and, like the cleanliness of the milk produced in the District, is in great measure governed by the personal interest of the farmer and his wife.

" During the year under review one large Co-operative Society, which draws a part of its milk supply from the Western District, instituted a clean milk competition among the farmers who send milk to its creamery. Samples of milk from each farm are taken every month, and subjected to a bacterial count, the fermentation test, coliform test, and chemical analysis for butter fat. The complete results are sent to the producers, each farm being given a number which is only known to the owner. In this way the farmer can follow his progress month by month, and note his relative position. I have been impressed by the keen desire to improve their score, which the competition has developed among the farmers supplying this creamery, and advice on methods of production and equipment is eagerly sought by many who previously were apathetic in the matter. In the light of this experiment and of similar competitions in other counties, I think that the time is now opportune for the promotion of a voluntary clean milk competition among the dairy farmers of the District. The examination of the samples of milk would be the greatest expense in the matter, and I am certain that the assistance of the College of Agriculture could be obtained in carrying out this economically.

" In addition to tuberculosis, which is undoubtedly the greatest scourge that affects dairy herds at present, I have been impressed by the loss sustained by the dairy industry in the County from Contagious Abortion and Johne's Disease.

" The problem of tuberculosis in dairy cows, its control and ultimate eradication, is being tackled energetically, and good results are being noticed by competent observers in the realm of public health; but there will require to be a strong demand made by dairy farmers for an organised campaign against Contagious Abortion and Johne's Disease, as without their assistance and goodwill, the necessary measures would prove fruitless.

" These two diseases are not communicable to man; but the losses incurred through them, in addition to the loss from tuberculosis, have an appreciable effect on the cost of milk and are ultimately borne by the consumer.

" Under Section 21 of the Milk and Dairies (Scotland) Act of 1924, information was received on 29th March from Glasgow Corporation, that milk, consigned to the city from a dairy herd in the District, contained tubercle bacilli. A clinical examination of the herd was immediately carried out, and as no evidence of tuberculosis of the udder of any cow in the herd could be found, group samples were taken and submitted to the County Bacteriologist for biological examination. Duplicate samples were taken by officials of the Corporation, and similarly tested by the City Bacteriologist. In both

cases a negative result was obtained. Later in the year, the same herd was again reported to be supplying tuberculous milk, and a clinical examination was made as before, with like result. Group samples were taken and submitted for biological examination, and again the result was negative. On this occasion the results were not checked by samples being taken by the Corporation, though facilities to do so were offered by the owner."

Milk (Special Designation) Order, 1923.—The farms referred to in the Veterinary Inspector's Report as having been licensed under the above Order are as follows :—
CERTIFIED MILK.

William Semple, Ballagan, Strathblane.

GRADE A (TUBERCULIN-TESTED) MILK.

J. B. Arneil, Ballewan Farm, Blanefield.

W. J. Thomson, Craigbrock, Blanefield.

GRADE A MILK.

James Lawrie, Head of Balglass, Balfron.

J. Paterson, Claylands, Balfron.

J. Haddow, Broughmore, Balfron.

J. Alston, Ballikinrain Home Farm, Balfron.

Jas. J. Leitch, Broadgate, Strathblane.

Ross & M'Lean, Rashiehill, Fintry.

In each case the standard of cleanliness and efficiency of method were well maintained throughout the year.

The following statement gives a synopsis of the reports by the Bacteriologist on the samples submitted to him :—

SYNOPSIS OF BACTERIOLOGICAL REPORTS ON SAMPLES OF MILK FROM GRADED FARMS IN 1928

Farm	Date of Report	No. of Organisms on Agar In 48 hours—in			Evidence of Coliform Bacilli in 72 hours			Remarks
		1/10 cc	1/100 cc	1/1000 cc	Tube No.			
					1	2	3	
Head of Balglass	9/8/28	5,600	10,400	24,000	Nil	Nil	Nil	A very clean milk
Balfroun	27/12/28	60,000	70,000	74,000	Acid	Acid	Acid & Gas	Coll?
Ballagan (Cert.)	8/8/28	...	2,900	8,000	Nil	Nil	Nil	A very clean milk
Strathblane	30/12/28	...	15,000	20,000	"	"	"	A very clean milk
Ballewen (T.T.)...	8/8/28	...	3,500	5,000	"	"	"	A very clean milk
Blanchfield	30/12/28	...	5,400	13,000	"	"	"	A very clean milk
Ballikinrah	9/8/28	2,400	12,600	66,000	"	"	"	A clean milk
Balfroun	27/12/28	...	20,000	17,000	"	"	"	A clean milk
Broadgate	8/8/28	...	2,100	6,000	"	"	"	A very clean milk
Strathblane	30/12/28	...	1,200	6,000	"	"	"	A very clean milk
Broughtmore	11/8/28	3,670	6,100	4,000	"	"	"	A clean milk
Balfroun	25/12/28	...	9,200	14,000	"	"	"	A clean milk
Claylands	9/8/28	7,360	16,600	17,500	"	"	"	A clean milk
Balfroun	25/12/28	...	2,300	6,000	"	"	"	A clean milk
Craigbrock	27/10/28	...	5,000	8,000	"	"	"	A clean milk
Blanchfield	27/12/28	...	14,000	104,000*	"	"	"	Very satisfactory
Rachiehill	11/8/28	4,600	11,600	20,000	Acid & Gas	"	"	A clean milk*
Finty	25/12/28	...	20,000	12,000	Nil	"	Acid	Coll?
							Nil	Satisfactory

*Accidental contamination.

SLAUGHTERHOUSES.

In the Western District there are five private slaughter-houses—two at Lennoxton, and one each at Balfron, Killearn and Drymen. Sixty-one inspections were made during the year, and no cause for complaint was found. They are kept in a reasonably cleanly condition, and are well conducted.

Under the Slaughter of Animals (Scotland) Act, 1928, nine persons were licensed to slaughter or stun animals. A list of these was supplied to the Chief Constable of the County for his use.

INFECTIOUS DISEASE.

Tables XXIV. and XXV. give the statistics regarding the notification of infectious diseases. In all, 69 cases were notified to the Public Health Department, of which 27 were of scarlet fever, 6 of diphtheria, 6 of erysipelas, 6 of chickenpox 1 of infantile paralysis, 2 of encephalitis lethargica, 10 of acute primary pneumonia, and 11 of tuberculosis. Excluding the 6 cases of chickenpox, which was made notifiable for a limited period in view of the occurrence of smallpox in different parts of the country, the total number of cases was 63, as compared with 47 in 1927, 75 in 1926, and 76 in 1925, and is somewhat below the average for the ten years previous to that, namely, 70.

Scarlet Fever.—Of the 27 cases of scarlet fever, 10 were in the parish of Balfron, 8 in Campsie parish, 6 in Strathblane parish, and 3 in the parish of Drymen. All but four were removed to hospital, and all recovered.

Diphtheria.—Only six cases occurred—2 in the parish of Campsie and four in the parish of Strathblane. Every case was isolated in hospital, and there were no deaths.

Tuberculosis.—Of the 11 cases, 7 were of the pulmonary type and 4 non-pulmonary. The subject of the treatment of tuberculosis is dealt with in the County part of this report.

Non-Notifiable Infectious Disease, such as measles, whooping-cough, etc., usually come to my notice through the co-operation of the head teachers of schools. On receipt of intimation of the occurrence of such diseases amongst school children my Sanitary Inspector, as a rule, makes a door to door visitation, advising the parents as to the precautions to be taken, and thereafter he forwards a report on the cases to me. The number of cases thus brought to my notice throughout the year was :—Measles, 35 ; whooping-cough, 1 ; mumps, 25.

School Closure on account of Infectious Disease.—Fortunately no occasion arose to justify closing a school or part of a school on account of infectious disease.

TABLE XXIV.—WESTERN DISTRICT—CASES OF INFECTIOUS DISEASE COMING TO THE KNOWLEDGE OF THE
MEDICAL OFFICER OF HEALTH DURING THE YEAR 1928.

Parish	Smallpox	Diphtheria and Membranous Croup	Erysipelas	Scarlet Fever	Typhus Fever	Enteric Fever	Continued Fever	Puerperal Fever	Cerebro-Spinal Fever	Ophthalmia Neonatorum	Chickenpox	Malaria	Dysentery	Infantile Paralysis	Acute Primary Pneumonia	Acute Influenzal Pneumonia	Infective Jaundice	Encephalitis Lethargica	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Total
Buchanan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Balfour	..	..	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Drymen	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Baldernock	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	3
Campsie	..	2	5	8	..	..	..	..	..	..	2	..	..	1	9	..	..	2	3	4	36
Killearn	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Finty	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..
Strathblane	..	4	1	6	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	17
Total	..	6	6	27	..	..	..	..	..	..	6	..	..	1	10	..	..	2	7	4	69
Removed to Hospital	..	6	2	23	..	..	..	..	..	..	..	..	..	1	..	..	..	1	3	3	39

TABLE XXV.—WESTERN DISTRICT.

RETURN OF CASES OF INFECTIOUS DISEASE NOTIFIED, &c., DURING THE YEAR ENDING
31ST DECEMBER, 1923.

DISEASE	NUMBER OF CASES COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH									
	At all Ages	At Age—Years							Cases removed to Hos- pital	Cases not re- moved Hos- pital
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and up- wards		
A.—Diseases specified in the Infectious Disease (Notification) Act, 1889.										
Typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarletina	27	...	2	13	9	2	...	1	23	4
Diphtheria and Membran- ous Croup	6	...	...	3	3	...	...	...	6	...
Erysipelas	6	...	...	1	...	...	4	1	2	4
Puerperal Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...
B.—Diseases notifiable in terms of Regulations made under Section 73 of the Public Health (Scotland) Act, 1897.										
Ophthalmia Neonatorum	...	...	...	...	...	...	...	...	...	...
Chickenpox	6	...	4	2	...	...	...	...	...	6
Infective Jaundice ...	...	...	...	...	...	...	...	...	...	...
Malaria	...	...	...	...	...	...	...	...	...	...
Dysentery	...	...	...	...	...	...	...	...	...	...
Infantile Paralysis ...	1	...	1	...	...	...	...	...	1	...
Polio-Encephalitis ...	...	...	...	...	...	...	...	...	...	...
Encephalitis Lethargica	2	...	1	...	...	1	...	...	1	1
Acute Primary Pneumonia	10	...	...	1	1	2	1	5	...	10
Do. Influenzal Pneumonia	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	7	...	...	...	4	2	1	...	3	4
Non-Pulmonary Tuber- culosis	4	...	1	2	1	...	...	...	3	1
Total of A. and B.	60	...	9	22	18	7	6	7	39	30

Cases notified in a previous year and removed to Hospital for the first time during 1898.

Cases notified in a previous year
and removed to Hospital for the
first time during 1923.

LENNOX HOSPITAL, 1928.

The total admissions to this Hospital during the year amounted to 214.

Of that total 118 were from East Dumbartonshire.

27 were from West Stirlingshire.

10 were from outside the primary area, and

59 were from Kirkintilloch.

Total 214 patients.

Cases from East Dumbartonshire—

Scarlet Fever,	...	...	87
Diphtheria, ...	...	...	17
Tuberculosis, ...	...	...	15
Enteric Fever,	...	...	1
Erysipelas, ...	...	...	1
Encephalitis Lethargica,	...	...	1
Pneumonia, ...	...	...	2

Total, ... 118

Cases from West Stirlingshire—

Scarlet Fever,	...	...	22
Diphtheria, ...	...	...	6
Tuberculosis, ...	...	...	3
Pneumonia, ...	...	...	1
Erysipelas, ...	...	...	2
Infantile Paralysis,	...	...	1
Meningitis, ...	...	...	1
Cerebro Spinal,	...	...	1

Total, ... 37

Cases from Kirkintilloch—

Scarlet Fever,	...	...	30
Diphtheria, ...	...	...	20
Tuberculosis, ...	...	...	6
Erysipelas, ...	...	...	2
Pneumonia, ...	...	...	1

Total, ... 59

Table xxvi gives figures with regard to cases admitted during the year.

The total days' residence of patients during the year was 8116 days, and the average residence was 37·9 days.

The average days' residences of the principal infectious diseases were—Scarlet Fever 39·13 days, Diphtheria 26·67 days, and Erysipelas 18·4 days.

TABLE XXVI.—ADMISSIONS TO LENNOX JOINT HOSPITAL, 1928

AGE IN YEARS		0-5		5-10		10-20		20-30		30-40		40-50		70-80		Totals	
Disease		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F. Both	
Scarlet Fever...	Recovered	10	13	18	28	15	15	...	4	2	1	1	...	...	...	46	61
	Remaining	6	1	5	4	2	6	...	...	...	...	1	...	...	...	14	11
	Died	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Diphtheria ...	Recovered	8	6	7	5	7	6	1	1	...	...	...	...	...	...	23	18
	Died	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1
	Recovered	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
Enteric Fever	Recovered	...	...	...	...	...	1	...	...	...	...	1	1	...	...	1	4
	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
	Recovered	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2	...
Pneumonia ...	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Meningitis ...	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Cerebro-Spinal Meningitis	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Infantile Paralysis	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Encephalitis	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Lethargia	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Died	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Tuberculosis ...	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Remaining	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Died	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	Recovered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Totals		28	22	31	37	27	30	4	0	6	7	8	4	...	1	104	110

Principal Rates per 1000 of Estimated Population

	Transfers		Corrected Number		Uncorrected	Corrected for Transfers	Corrected for Age and Sex Distribution
	Numbers Registered in District	Out	In	Both Sexes			
Total Births (including Illegitimate)	170	4	13	179	14.9	15.7	.....
Illegitimate Births	8	...	4	12	.....	6.7	.....
Marriages	59	...	...	...	5.2	.....	.....
Deaths	138	19	24	143	12.1	12.5	11.5
					.....	0.61	.....
					.....	0.26	.....
					.....	0.18	.....
					.....	56	.....

Birth-rate
 Illegitimate Birth-rate per 100
 Total Births
 Marriage-rate
 Death-rate—All Causes
 " All Tuberculosis
 " Tuberculosis of Respiratory System
 " Principal Epidemic Diseases (asterisked below)
 Infantile Mortality Rate (Deaths under One Year per 1000 Births)

CAUSES OF DEATH (corrected for Transfers).

CAUSES OF DEATH	ALL AGES			AGE											
	Both Sexes	Males	Females	—1	1—	5—	10—	15—	25—	35—	45—	55—	65—	75—	85 and over
•Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
•Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
•Scarlet Fever	2	1	1	2	...	...	...	...	...	...	...	...	...	...	...
•Whooping-Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
•Diphtheria	4	...	4	...	...	...	1	...	...	...	...	1	2	...	...
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis Lethargica	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Cerebro-Spinal Meningitis	2	1	1	1	1	...	...	...	...	...	...	1	...	...	...
Other Epidemic Diseases	3	...	3	...	...	...	...	...	...	1	2	...	...	...	...
Tuberculosis of Respiratory System	3	1	2	1	1	...	...	1	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Intestines and Peritoneum	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Disease	20	9	11	...	...	...	...	...	...	1	...	6	1	...	...
Malignant Tumours	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Cerebro-Spinal or Tuberculous)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	13	7	9	...	...	...	...	...	...	...	...	...	...	...	...
Heart Disease	19	10	9	...	...	...	1	...	...	...	1	3	...	...	...
Diseases of Arteries	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis... ..	12	5	7	1	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	2	1	1	...	...	...	...	...	...	...	...	3	1	5	1
Other Diseases of Respiratory System	3	1	2	1	...	...	...	...	...	...	...	...	2	...	...
•Diarrhoea and Enteritis (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Appendicitis	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
All Diseases of Liver (not Malignant)	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Nephritis, Acute and Chronic	2	1	1	...	...	...	...	...	...	...	...	...	2	...	...
Puerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy and Parturition	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Early Infancy and Malformations	5	2	3	5	...	...	...	...	...	...	...	...	...	...	...
Suicide	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Violent Deaths	6	3	3	...	...	...	...	1	...	...	...	...	...	...	...
Other Defined Diseases	33	15	18	...	1	...	...	1	1	...	...	4	8	14	4
Causes Ill-defined or Unknown	6	5	1	...	...	...	...	...	...	...	...	3	2	...	1
All Causes	143	65	78	10	3	...	2	3	1	6	10	21	45	33	9

VITAL STATISTICS.

Population.—The Registrar-General has estimated the population of the District for the purpose of vital statistics at 11,423. This is probably an under-estimate.

Births and Birth-Rates.—After correction for transfers, the births numbered 179, which gives a birth-rate of 15.7. This is exactly the same rate as that for the year 1927, which, with the exception of the year 1919, was the lowest on record.

Deaths and Death-Rates.—After correction for transfers, the number of deaths for the year was 143, giving a death-rate of 12.5 per 1000 of population, as compared with a rate of 11.7 for 1927, and 10.4 for 1926.

The deaths from tuberculosis numbered 7, giving a rate of 0.61, of which 0.26 was due to pulmonary tuberculosis.

From the "Principal Epidemic Diseases" only two deaths occurred, giving a death-rate of 0.18. The cause of death was whooping-cough in both cases.

The deaths under one year of age per 1000 births numbered 56.

BURGH OF BRIDGE OF ALLAN.

VITAL STATISTICS.

Population.—The estimated population on which the Registrar General has calculated the vital statistics for the burgh is 3739. This is an over-estimate. As I have explained in former Reports, the Registrar General's estimate is based on the census of 1921 at which time there was a temporary military population of 611, so that if that figure be deducted from the estimate the remainder—3,128—would probably be about correct.

Births and Birth-Rates.—The number of births occurring in the burgh was 28, and to that number there is to be added the births of 3 infants whose mothers were temporarily resident outwith the burgh, giving a total rate of 31. This gives a birth-rate—on the Registrar General's population—of 8·3. If the figure for corrected population be taken, however, the rate would be 9·9.

Deaths and Death-Rates.—After correction for transfers, the number of deaths during the year was 35, giving a death-rate of 9·4 per 1000 of population—or 11·1 if the corrected estimate for population be used. There were no deaths from tuberculosis and only one among the "Principal Epidemic Diseases," the cause being Whooping Cough. Two deaths of children under one year of age were recorded, giving an Infant Mortality rate of 65 per 1,000 births.

Table (2) gives the Registrar General's figures.

INFECTIOUS DISEASE.

From Table (1) it will be seen that the notified cases of infectious disease numbered 22, which is just four over the average for the past dozen years. The 22 cases included 13 of scarlet fever, six of diphtheria, and three of tuberculosis (non-pulmonary). Twelve of the scarlet fever cases and 5 of the diphtheria cases were removed to hospital and all recovered.

HOUSING.

The twelve three-apartment houses mentioned in my last Annual Report as having been approved under the Town Councils No. 2 Development Scheme, have now been completed and occupied.

WATER SUPPLY.

The water supply to the burgh is of excellent quality and is more than sufficient for all purposes.

TABLE (I).—BURGH OF BRIDGE OF ALLAN.

RETURN OF CASES OF INFECTIOUS DISEASE NOTIFIED, &C., DURING THE YEAR ENDING
31ST DECEMBER, 1928.

NUMBER OF CASES COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.									
DISEASE	At all Ages	At Age—Years						Cases removed to Hos-pital	Cases not re-moved Hos-pital
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65			65 and up-wards

A.—Diseases specified in the Infectious Disease (Notification) Act, 1889.

typhoid or Enteric Fever	...	...	...	...	...	...	...	...	...	...
typhus Fever	...	...	...	...	...	...	...	...	...	...
smallpox	...	...	...	...	...	...	...	...	...	...
scarlet Fever or Scarlatina	13	...	3	5	3	2	...	...	12	1
diphtheria and Membranous Croup	6	...	1	1	2	...	1	1	5	1
erysipelas	...	...	...	...	...	...	...	...	...	...
several Fever	...	...	...	...	...	...	...	...	...	...
cholera	...	...	...	...	...	...	...	...	...	...
relapsing Fever	...	...	...	...	...	...	...	...	...	...
continued Fever	...	...	...	...	...	...	...	...	...	...

B.—Diseases notifiable in terms of Regulations made under Section 78 of the Public Health
(Scotland) Act, 1898.

ophthalmia Neonatorum	...	...	...	...	...	...	...	...	...	...	Cases notified in a previous year and removed to Hospital for the first time during 1928.
chickenpox	...	...	...	...	...	...	...	...	...	...	
infective Jaundice	...	...	...	...	...	...	...	...	...	...	
malaria	...	...	...	...	...	...	...	...	...	...	
typhenteria	...	...	...	...	...	...	...	...	...	...	...
typhoid Fever	...	...	...	...	...	...	...	...	...	...	...
acute Primary Pneumonia	...	...	...	...	...	...	...	...	...	...	...
acute Influenzal Pneumonia	...	...	...	...	...	...	...	...	...	...	...
pulmonary Tuberculosis	...	...	...	...	...	...	...	...	...	...	...
non-Pulmonary Tuberculosis	3	...	1	2	...	...	...	...	1	2	...
Total of A. and B.	22	...	5	8	5	2	1	1	18	4	...

VACCINATION (SCOTLAND) ACT, 1907.

Under the above Act there were three persons who stated their objection on conscientious grounds to vaccination of their infants, so that approximately 9 per cent. of the children born in 1928 are unvaccinated.

SLAUGHTER-HOUSE AND MEAT INSPECTION.

There is only one private slaughter-house and this is invariably found to be kept in a cleanly and wholesome condition.

FOOD AND DRUGS ACTS.

Eight samples were taken for analysis under the above acts, namely—seven of sweet milk and one of whisky. Seven of these were certified as genuine and one not genuine, but no prosecution was undertaken.

FACTORY AND WORKSHOPS ACT.

Fifteen visits of inspection were paid to factories and 40 to workshops. No defects were found.

DAIRIES.

Mr. M'Gregor, the Veterinary Inspector, reports that he inspected the three dairy herds twice during the year, and examined the udder of every cow for tuberculosis. No case of tuberculosis was found. Nine cases of atrophy of the udder were observed, these probably being the result of previous mastitis. One case of acute-mastitis was found, but the milk from the cow concerned was not being used for human consumption.

The general condition and cleanliness of the cows, Mr. M'Gregor states, were very good. The three dairy farmers keep an excellent type of dairy cow and take every precaution to insure that the milk supplied to the public is clean and of high quality.

Principal Rates per 1000 of Estimated Population

	Uncorrected	Corrected for Transfers	Corrected for Transfers and adjusted for Age and Sex Distribution
Birth-rate	14.9	15.7	.....
Illegitimate Birth-rate per 100 Total Births ... ..	.....	6.7	.....
Marriage-rate	5.2	.....	.....
Death-rate.—All Causes	12.1	12.5	11.5
" All Tuberculosis .....	.....	0.61	.....
" Tuberculosis of Respiratory System .....	.....	0.26	.....
" Principal Epidemic Diseases (asterisked below) .....	.....	0.18	.....
Infantile Mortality Rate (Deaths under One Year per 1000 Births) .....	.....	56	.....

	Numbers Registered in District	Transfers		Corrected Number	
		Out	In	Both Sexes	Females
Total Births (including Illegitimate)	170	4	13	179	83
Illegitimate Births	8	...	4	12	5
Marriages	59	...	...	...	...
Deaths	138	19	24	143	78

CAUSES OF DEATH (corrected for Transfers).

CAUSES OF DEATH	ALL AGES			AGE											
	Both Sexes	Males	Females	—1	1—	5—	10—	15—	25—	35—	45—	55—	65—	75—	85 and over
•Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
•Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
•Scarlet Fever	2	1	1	2	...	...	...	...	...	...	...	...	...	...	...
•Whooping-Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
•Diphtheria	4	...	4	...	...	...	1	...	...	...	...	1	2	...	...
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	1	...	1	...	...	...	...	...	...	1	...	1	...	...	...
Other Epidemic Diseases	2	1	1	1	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Respiratory System	3	...	3	...	...	...	...	1	...	1	2	...	...	...	...
Tuberculous Meningitis	3	1	2	1	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Intestines and Peritoneum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Disease	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Malignant Tumours	20	9	11	...	...	...	...	...	...	1	...	6	9	4	...
Rheumatic Fever	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Meningitis (not Cerebro-Spinal or Tuberculous)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	16	7	9	...	...	...	...	...	...	...	1	...	...	...	...
Heart Disease	19	10	9	...	...	...	1	...	...	1	3	...	...	...	...
Diseases of Arteries	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis... ..	12	5	7	1	...	...	...	...	...	...	1	3	...	...	...
Pneumonia (all forms)	2	1	1	...	...	...	...	...	...	...	...	...	2	...	...
Other Diseases of Respiratory System	3	1	2	1	...	...	...	...	...	...	1	...	1	...	...
•Diarrhoea and Enteritis (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...
All Diseases of Liver (not Malignant)	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Nephritis, Acute and Chronic	2	1	1	...	...	...	...	...	...	...	...	...	2	...	...
Puerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy and Parturition	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Early Infancy and Malformations	5	2	3	5	...	...	...	...	...	...	...	...	...	...	...
Suicide	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Violent Deaths	6	3	3	...	...	...	...	1	...	...	1	...	...	...	...
Other Defined Diseases	33	15	18	...	1	...	...	1	1	...	...	4	8	14	4
Causes Ill-defined or Unknown	6	5	1	...	...	...	...	...	...	...	...	3	2	...	1
All Causes	143	65	78	10	3	...	2	3	1	6	10	21	45	33	9

BURGH OF DENNY AND DUNIPAGE.

VITAL STATISTICS.

Population.—According to a census by the County Police, the population of the Burgh is 5520, as compared with 5130 at the time of the general census of 1921, showing an increase of 390 persons. For his statistical purposes, however, the Registrar General estimated the population at 4906 as at the middle of the year. Obviously this is an under-estimate.

Births and Birth-Rates.—After slight correction for transcripts, the total number of births in the burgh is given as 103, 54 of these being of males, and 49 of females. This gives a birth-rate of 21 per 1,000, which is the second lowest on record for the burgh.

Deaths and Death-Rates.—The number of deaths after correction was 69, giving a death rate of 14.1 per 1,000 of population. For the past ten years the death rates have been :—1918, 16.8 ; 1919, 15.1 ; 1920, 11.8 ; 1921, 12.9 ; 1922, 18.8 ; 1923, 12.3 ; 1924, 15.6 ; 1925, 14.3 ; 1926, 10.0 ; and 1927, 11.9 ; showing an average of 13.9 per thousand.

The number of deaths from pulmonary tuberculosis was only two, giving a death-rate of 0.41, and from non-pulmonary tuberculosis there were no deaths. From the "Principal Epidemic diseases" there were five deaths (four from Whooping Cough, and one from Scarlet Fever), giving a death-rate of 1.02. The number of deaths under one year of age was 8, which is equal to an Infantile Mortality rate of 78.

Table (4) gives the Registrar General's figures for Births, Marriages and Deaths, together with a note of the principal causes of death :—

HOUSING.

Towards the close of the year, ten houses were formally represented by me as unfit for human habitation. As it was impossible for the tenants to find other houses, however, proceedings were delayed. Under a slum clearance scheme the Town Council, I understand, are to proceed to build 28 houses of two and three apartments, and it is expected that these will be completed before the end of 1929. Thereafter, it is intended to go on with other schemes with a view to getting rid of all the old and unfit houses in the burgh, and to re-house the dispossessed tenants.

WATER SUPPLY.

The water supply of the burgh is of excellent quality and is

sufficient for all purposes. Mr. Cook, the water superintendent, informs me that the supply was maintained at full pressure all the year.

DRAINAGE.

As mentioned in my last Annual Report arrangements were made to have the sewage field looked after by direct labour under the supervision of Mr. Cook. The new arrangements have worked very well and much improvement has resulted.

The new settling tank also referred to in my previous report has been completed and is giving every satisfaction.

INFECTIOUS DISEASE.

The number of cases of infectious disease notified was 88, including 37 of scarlet fever, 6 of diphtheria, 1 of erysipelas, 1 of puerperal fever, 12 of chickenpox, 26 of pneumonia, and 5 of tuberculosis. All the cases of scarlet fever and diphtheria and the case of puerperal fever were removed to Bannockburn Hospital. One of the cases of scarlet fever proved fatal.

Excluding chickenpox (which is notifiable more as a precautionary measure with the view of the possible discovery of a missed case of mild smallpox) the net number of notified cases was 76, as compared with 37 in 1927 ; 36 in 1926 : 39 in 1925 ; 55 in 1924 ; and 31 in 1923, so that the number for 1928 was just about twice the average for the previous five years. This was due to a prevalence of scarlet fever throughout the year and also to the large number of cases of acute primary pneumonia which were notified.

School Closure.—On no occasion was it considered necessary to close either of the schools or any of the departments of the schools on account of infectious disease.

Table (3) gives the details with regard to the diseases notified in various age groups.

FACTORY AND WORKSHOP ACT.

The number of factories in the burgh is 20 and the number of workshops 17. The principal workshops are :—Tailors, 3 ; plumbers, 3 ; blacksmiths, 2 ; painters, 2 ; joiner, 1 ; dress-maker, 1 ; printer, 1 ; shoemaker, 1 ; and 3 others. Thirty inspections were made by the Sanitary Inspector.

VACCINATION (SCOTLAND) ACT.

The number of declarations of conscientious objection made under the above Act was 37, which is equal to 36 percent. of the births registered during the year.

TABLE (3).—BURGH OF DENNY AND DUNIPACE.

RETURN OF CASES OF INFECTIOUS DISEASE NOTIFIED, &c., DURING THE YEAR
ENDING 31ST DECEMBER, 1928.

NUMBER OF CASES COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.									
DISEASE	At all Ages	At Age—Years						Cases re- moved to Hos- pital	Cases not re- moved Hos- pital
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65			65 and up- wards

A.—Diseases specified in the Infectious Disease (Notification) Act, 1889.

Shoal or Enteric Fever	...	...	...	...	...	...	...	...	...	...
Shus Fever	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Shoal Fever or Scarlatina	37	2	9	23	3	...	...	...	37	...
Shoal and Membran-	...	...	...	...	...	...	...	...	...	...
Shoal Croup	6	...	2	2	...	2	...	...	6	...
Shoal	1	...	...	...	...	1	...	...	...	1
Shoal Fever	1	...	...	...	...	1	...	...	1	...
Shoal	...	...	...	...	...	...	...	...	...	...
Shoal Fever	...	...	...	...	...	...	...	...	...	...
Shoal Fever	...	...	...	...	...	...	...	...	...	...

*B.—Diseases notifiable in terms of Regulations made under Section 78 of the Public Health
(Scotland) Act, 1898.*

Thalæmia Neonatorum	...	...	...	...	...	...	...	...	...	...	Cases notified in a previous year and removed to Hospital for the first time during 1928.
Shoal	12	...	9	3	...	...	...	...	...	12	
Shoal Janndice	...	...	...	...	...	...	...	...	...	...	
Shoal	...	...	...	...	...	...	...	...	...	...	
Shoal	...	...	...	...	...	...	...	...	...	...	
Shoal	...	...	...	...	...	...	...	...	...	...	Cases notified in a previous year and removed to Hospital for the first time during 1928.
Shoal Lethargica	...	...	...	...	...	...	...	...	...	...	
Shoal Primary Pneumonia	26	1	6	5	6	5	1	2	9	17	
Shoal Influenzal	...	...	...	...	...	...	...	...	...	...	
Shoal	...	...	...	...	...	...	...	...	...	...	
Shoal Tuberculosis	2	...	...	2	...	...	...	...	...	2	1
Shoal Pulmonary Tuber- culosis	3	...	1	1	1	...	...	...	2	1	...
Total of A. and B.	88	3	27	36	10	9	1	2	55	33	1

COMMON LODGING HOUSES.

The three lodging houses are reported by the Sanitary Inspector to have been fairly well kept. Many of the beds have not been in use for some time owing to the lack of work in the district.

FOOD AND DRUGS ACTS.

Nine samples were taken, all of them being of milk in course of delivery to the dairies. The samples were all genuine and of a very high standard.

SLAUGHTER-HOUSE AND MEAT INSPECTION.

The total number of animals slaughtered during the year was 1382, including 423 oxen, 6 bulls, 100 heifers, 25 cows, 97 calves, 334 sheep, 272 lambs, and 125 pigs.

The following were condemned on account of tuberculous :— the carcase and viscera of a heifer, the hindquarters and viscera of a cow, and the carcasses and viscera of a cow and two bullocks. In addition the carcasses and viscera of three pigs were condemned, two being affected with dropsy and one with swine fever.

DAIRIES, COWSHEDS AND MILK SHOPS.

The County Veterinary Inspector inspected the 20 cows at the two registered dairies in the burgh twice during the year. No case of tuberculous of the udder was found but one cow was found to be suffering from a chronic cough and showed clinical signs of tuberculous. The animal was slaughtered under the provisions of the Tuberculous Order and post mortem examination confirmed the diagnosis. All the other cows in the burgh were found to be healthy and in a clean state. Besides the above mentioned two dairies, there are seven purveyors of milk, and nine wholesale dealers in milk, so that the total number of milk dealers on the register is 18.

Principal Rates per 1000 of Estimated Population

	Uncorrected	Corrected for Transfers	Corrected for Transfers and adjusted for Age and Sex Distribution
Birth-rate	7.5	8.3	.....
Illegitimate Birth-rate per 100 Total Births ... ..	.....	9.7	.....
Marriage-rate	6.2	.....	.....
Death-rate.—All Causes	8.6	9.4	8.7
" All Tuberculosis ... ..	.....	0.00	.....
" Tuberculosis of Respiratory System ... ..	.....	0.00	.....
" Principal Epidemic Diseases (asterisked below) ... ..	.....	0.27	.....
Infantile Mortality Rate (Deaths under One Year per 1000 Births) ... ..	.....	65	.....

	Numbers Registered in District	Transfers			Corrected Number	
		Ont	In	Both Sexes	Males	Females
Total Births (including Illegitimate)	28	...	3	31	14	17
Illegitimate Births	1	...	2	3	2	1
Marriages	23	...	...	...	...	...
Deaths	32	4	7	35	8	27

CAUSES OF DEATH (corrected for Transfers).

CAUSES OF DEATH	ALL AGES			AGE											85 and over
	Both Sexes	Males	Females	—1	1—	5—	10—	15—	25—	35—	45—	55—	65—	75—	
*Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Whooping-Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Diphtheria	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...
Influenza	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...
Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Respiratory System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis of Intestines and Peritoneum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Disease	...	...	...	...	...	...	...	...	...	...	1	1	3	1	...
Malignant Tumours	6	1	5	...	...	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Cerebro-Spinal or Tuberculous)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Apoplexy	4	...	4	...	...	...	...	...	...	...	...	1	1	2	...
Heart Disease	4	...	4	...	...	...	...	...	...	...	...	1	1	3	...
Diseases of Arteries	3	2	1	...	...	...	...	...	...	...	...	1	1	...	1
Bronchitis...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	3	2	1	...	...	...	...	...	...	...	...	...	1	2	...
Other Diseases of Respiratory System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
*Diarrhoea and Enteritis (under 2 years)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All Diseases of Liver (not Malignant)	1	...	1	...	...	...	...	...	...	...	...	...	...	1	...
Nephritis, Acute and Chronic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Sepsis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases and Accidents of Pregnancy and Parturition	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Early Infancy and Malformations	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...
Sulcide	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Violent Deaths	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...
Other Defined Diseases	10	1	9	1	...	1	...	...	...	...	1	...	4	2	1
Causes Ill-defined or Unknown	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All Causes	35	8	27	2	1	1	...	1	...	...	3	3	11	11	2

